

# Exhibit 79

UNITED STATES DISTRICT COURT  
DISTRICT OF NEW JERSEY

**IN RE JOHNSON & JOHNSON  
TALCUM POWDER PRODUCTS  
MARKETING, SALES PRACTICES,  
AND PRODUCTS LIABILITY  
LITIGATION**

***THIS DOCUMENT RELATES TO ALL CASES***

**MDL NO. 16-2738 (FLW) (LHG)**

**RULE 26 EXPERT REPORT OF  
ELLEN BLAIR SMITH, MD**

Date: November 16, 2018



Ellen Blair Smith, MD

As a physician who specializes in the treatment of women with cancer (including ovarian cancer), I was asked to provide professional opinions on the question of whether the genital use of talcum powder products can cause ovarian cancer. I was also asked, if I found this to be the case, to further provide opinions on the biological mechanism(s) for this effect.

## **BACKGROUND AND QUALIFICATIONS**

My name is Ellen Blair Smith. My attached CV reports my education and medical training. I practiced gynecologic oncology in Charlottesville, Virginia from July 1984 until February 1987 as an assistant professor at the University of Virginia. I then left academic medicine to open my own private practice of gynecologic oncology in Austin, Texas. That practice involved care of women known or suspected to have gynecologic cancers and continued for more than 28 years. During these years, I was responsible for all aspects of the care of hundreds of women with epithelial ovarian cancer. That care involved diagnosis, preoperative, surgical, and postoperative care, chemotherapy selection and administration and post-treatment care and surveillance. All too often post-treatment surveillance led to the diagnosis of recurrent cancer and the treatment cycle resumed. All too often, after months or years (up to 21 years of care for one patient), I provided end-of-life care for my patients.

My dissatisfaction with the inadequacies of screening systems to detect ovarian cancer early led me to follow enthusiastically the discoveries of genes that increase the risk of ovarian cancer and to aggressively promote the detection of such genes. Before these tests were commercially available, I worked with geneticist-physicians at the University of Pennsylvania and Duke University to detect these genes in my patients with ovarian cancer and their daughters. I was an early advocate of risk-reducing salpingoophorectomy and lectured throughout Texas by invitation of the Texas Medical Association. In 2004, Myriad Genetics (which had patented the BRCA test) asked me to be its first gynecologic oncologist speaker. Until roughly 2011, I delivered many lectures to gynecologic colleagues throughout the US.

In November 2001, I took a leave of absence and moved to Paris, France, with my children while my husband pursued a Guggenheim fellowship there. While there, I returned to the US to attend the Society of Gynecologic Oncologists to hear the latest research in ovarian cancer presented. I also attended a European Cancer conference in Paris and was excited to first hear the results of the Scottish Randomised Trial in Ovarian Cancer (SCOTROC), a large international randomized trial comparing two different chemotherapy regimens for the treatment of epithelial ovarian cancer ovarian cancer trial in which I enrolled patients. I returned to my practice in August of 2002.

To enhance the end of life care of my gynecologic oncology patients, I pursued further education in Hospice and Palliative Care, passing the written examination to become board certified in 2010. I retired from my gynecologic oncology practice in December of 2015. In April of 2017, I returned to patient care as medical director of Halcyon Home Hospice. In my role with a hospice organization, I continue to care for patients with ovarian and other cancers. My CV is attached as Exhibit A.

## METHODOLOGY

In preparing this report, I began with a comprehensive review of the medical literature. I relied on PubMed searches on many topics, including talc and ovarian cancer, as well as searched authors. I then read many of the references of the articles cited in those papers. I sometimes followed this research with searches on Google or Google Scholar on the same subjects to assure that I had found all relevant references. This literature included epidemiological studies, review articles, mechanistic articles and opinion articles on this topic and related subjects. I additionally reviewed information, including Johnson & Johnson and Imerys company documents that I either requested or considered relevant to my opinions. These were provided by plaintiffs' attorneys. Finally, I drew on my own educational resources, as well as my education, training, and experience caring for patients with ovarian cancer. This is the same methodology and scientific rigor that I have used regularly in my professional career and clinical practice, to explore and understand a topic of interest.

## OVERVIEW OF OVARIAN CANCER

Cancers of the ovary may arise from the epithelium/mesothelium covering the ovary, called epithelial ovarian cancer (EOC); from the oocytes of the ovary, called germ cell tumors; or, more rarely, from the hormone-producing cells of the ovary, the sex cord-stromal tumors. This report addresses EOC, the type of ovarian cancer associated with talcum powder exposure.

### *Pathogenesis*

The history as to the origin of ovarian cancer must be divided into before 2008 and after 2008. Before 2008, incessant ovulation and the repair of the monthly breaks in ovarian surface epithelium was believed to be responsible for EOC. (Fathalla 1971). That more DNA errors would be generated with more ovulation defects made intuitive sense and seemed to be supported by the epidemiologic evidence of higher parity (ovulation free windows) decreasing risk of EOC (La Vecchia 2017). Furthermore, the first generation of high estrogen oral contraceptives that blocked ovulation also decreased ovarian cancer. (Havrilesky et al. 2013) Levanon proposed that EOC is, in fact, two different diseases with two etiologies; the premalignant state of Type II was, as yet, unidentified. Budding molecular data support this division. (Levanon, Crum, and Drapkin 2008).

Until 2008, EOC was thought distinct from fallopian tube cancer and primary peritoneal cancer. While the cell of origin for all these cancers appears similar, many papers were published and conventions defined to separate them. The pioneering work of scientists/physicians at Brigham and Women's and the Dana Farber revealed that many EOCs arise in the fallopian tube and metastasize to the ovary and/or peritoneum, at least in women who harbor genetic homologous repair defects. (Levanon, Crum, and Drapkin 2008). Both Fathalla and the researchers at Brigham and Women's have updated and more clearly defined their hypotheses in light of the increased role of fallopian tube epithelium in EOC and growing molecular data. (Levanon, Crum, and Drapkin 2008; Fathalla 2013). Dubeau and Drapkin include and support the role of extrauterine Mullerian epithelium, as well as tubal and ovarian epithelium, in their hypotheses of pathogenesis of EOC. (Dubeau and Drapkin 2013). For our purposes, we consider epithelial

cancers of the ovary, fallopian tubes, and peritoneum to be a single entity. All are associated with talcum powder usage

The quest for a molecular understanding of the ways EOC arise is ongoing, but has also been described extensively. There are certain factors that can initiate the cascade of DNA changes that cause unregulated proliferation, acquisition of more DNA damage, and inhibition of programmed cell death (apoptosis) - the normal fate of abnormal cells in a healthy system. For example, loss of TP53 (a gene essential for regulating cell division and preventing tumor formation), function has been shown to appear early in the genesis of serous EOC. (Chien et al. 2015).

### ***Risk Factors***

Generally accepted risk factors for EOC, in addition to talcum powder and asbestos, include inherited gene mutations, family history, obesity, nulliparity, advanced age, history of endometriosis, infertility, polycystic ovarian syndrome, intrauterine devices, pelvic inflammatory disease, early menarche and late menopause. Additionally, there are factors that are recognized as protective. These include tubal ligation/sterilization (TS), oral contraceptive use, salpingectomy, salpingo-oophorectomy, hysterectomy, and breast feeding. (Hunn and Rodriguez 2012; Mallen, Townsend, and Tworoger 2018; Park et al. 2018; Folkins et al. 2018). Risk factors are not mutually exclusive. They can be cumulative, additive, and synergistic. (Vitonis, Titus-Ernstoff, and Cramer 2011; S. Wu et al. 2018).

Inherited gene mutations, such as BRCA-Fanconi anemia pathway and Lynch syndrome mismatch repair genes, are discussed in another section.

The Ovarian Cohort Consortium pooled data from 21 prospective cohort studies on 1.3 million women. (Wentzensen et al. 2016). In these studies, 5584 women were diagnosed with EOC and risk comparisons were made for parity, oral contraception use, breast feeding, age at menarche, age at menopause, menopausal HRT use, tubal ligation, endometriosis, first degree family history of breast cancer, first degree history of ovarian cancer, BMI, height, and smoking). In a group this large, histologic subclassification could be done and associations were made for serous/poorly differentiated EOC, endometrioid EOC, clear cell EOC and mucinous EOC. One thousand EOC patients had “other” or missing histologic information. Multiparity decreased risk in all ovarian cancer subtypes. Oral contraceptive use for 5 years and for 10 years decreased risk in all but mucinous tumors. Late menopause increased risk in only endometrioid and clear cell cancers.

### ***Diagnosis***

The diagnosis of EOC may occur at surgery for a pelvic mass, incidentally at surgery for another reason, or by cytologic evaluation of paracentesis of ascites.

### ***Staging***

Ovarian cancer, regardless of cell type, is staged surgically. By convention, we use International Federation of Gynecology and Obstetrics (FIGO) staging. The staging system changes every 10-

15 years as data allowing discrimination are reviewed. It was always my practice to note in a patient's chart the original stage and year of that staging versus contemporary stage.

<b>STAGE I: Tumor confined to ovaries</b>			
<b>OLD</b>		<b>NEW</b>	
IA	Tumor limited to 1 ovary, capsule intact, no tumor on surface, negative washings/ascites.	IA	Tumor limited to 1 ovary, capsule intact, no tumor on surface, negative washings.
IB	Tumor involves both ovaries otherwise like IA.	IB	Tumor involves both ovaries otherwise like IA.
IC	Tumor involves 1 or both ovaries with any of the following: capsule rupture, tumor on surface, positive washings/ascites.	IC <i>Tumor limited to 1 or both ovaries</i>	<i>Surgical spill</i>
		IC1	<i>Capsule rupture before surgery or tumor on ovarian surface.</i>
		IC2	<i>Malignant cells in the ascites or peritoneal washings.</i>
		IC3	

<b>STAGE II: Tumor involves 1 or both ovaries with pelvic extension (below the pelvic brim) or primary peritoneal cancer</b>			
<b>OLD</b>		<b>NEW</b>	
IIA	Extension and/or implant on uterus and/or Fallopian tubes	IIA	Extension and/or implant on uterus and/or Fallopian tubes
IIB	Extension to other pelvic intraperitoneal tissues	IIB	Extension to other pelvic intraperitoneal tissues
IIC	IIA or IIB with positive washings/ascites.		

*\*\*Old stage IIC has been eliminated\*\**

**STAGE III: Tumor involves 1 or both ovaries with cytologically or histologically confirmed spread to the peritoneum outside the pelvis and/or metastasis to the retroperitoneal lymph nodes**

OLD		NEW	
IIIA Microscopic metastasis beyond the pelvis.		<i>IIIA ( Positive retroperitoneal lymph nodes and/or microscopic metastasis beyond the pelvis)</i>	
IIIA1		<i>IIIA1 Positive retroperitoneal lymph nodes only</i>	
		<i>IIIA1(i) Metastasis ≤ 10 mm</i>	<i>IIIA1(ii) Metastasis &gt; 10 mm</i>
IIIA2 Microscopic, extrapelvic (above the brim) peritoneal involvement ± positive retroperitoneal lymph nodes		<i>IIIA2 Microscopic, extrapelvic (above the brim) peritoneal involvement ± positive retroperitoneal lymph nodes. Includes extension to capsule of liver/spleen.</i>	
IIIB	Macroscopic, extrapelvic, peritoneal metastasis ≤ 2 cm in greatest dimension.	<i>IIIB Macroscopic, extrapelvic, peritoneal metastasis ≤ 2 cm ± positive retroperitoneal lymph nodes. Includes extension to capsule of liver/spleen.</i>	
IIIC	Macroscopic, extrapelvic, peritoneal metastasis > 2 cm in greatest dimension and/or regional lymph node metastasis.	<i>IIIC Macroscopic, extrapelvic, peritoneal metastasis &gt; 2 cm ± positive retroperitoneal lymph nodes. Includes extension to capsule of liver/spleen.</i>	

**STAGE IV: Distant metastasis excluding peritoneal metastasis**

OLD		NEW	
IV	Distant metastasis excluding peritoneal metastasis. Includes hepatic parenchymal metastasis.	<i>IVA Pleural effusion with positive cytology</i>	
		<i>IVB Hepatic and/or splenic parenchymal metastasis, metastasis to extra-abdominal organs (including inguinal lymph nodes and lymph nodes outside of the abdominal cavity)</i>	

FIGO Ovarian Cancer Staging Effective Jan. 1, 2014<sup>1</sup>

**Treatment**

The treatment of ovarian cancer is usually straight-forward: surgically remove all the visible cancer, establish locations of invisible cancer (microscopic metastases, define best treatment and prognosis, then treat -in the majority of cases - with a taxane and a platinum chemotherapy doublet. (Vasey et al. 2004; Armstrong et al. 2006).

However, seventy-five percent of ovarian cancer cases present with metastases to the upper abdomen or beyond. Suboptimal debulking (leaving grossly visible tumor) has no survival benefit over primary chemotherapy. (Horowitz et al. 2015). The physicians at MD Anderson established a protocol for preoperative laparoscopy and the opinions of two trained gynecologic oncologists, in concert with clinical and laboratory findings, to judge whether a tumor was resectable. (Nick et al. 2015). These “debulking” surgeries are quite complex, require specialized training, and often necessitate consultation from other surgical specialties.

<sup>1</sup> [https://www.sgo.org/wp-content/uploads/2012/09/FIGO-Ovarian-Cancer-Staging\\_1.10.14.pdf](https://www.sgo.org/wp-content/uploads/2012/09/FIGO-Ovarian-Cancer-Staging_1.10.14.pdf)

Chemotherapy with a platinum and a taxane follows. These drugs may be delivered intravenously or intraperitoneally. Usually, six cycles of chemotherapy are given. Remission occurs in over 70% of patients, as evidenced by CT scans, physical examination, and CA125 (a clinically used biomarker for screening and detection) levels. Surveillance begins.

In patients with Stage III and IV (typically 75% of patients with EOC), recurrence will follow in 5-24 months. Then we evaluate again for surgery (isolated focal recurrence versus multifocal or unresectable recurrence) and additional chemotherapy. (Rasool et al. 2010; Parmar et al. 2003).

This cycle typically continues until my patient's tumor has become resistant to platinum and two other agents. At that time, the probability of her tumor responding to any standard chemotherapy is essentially nonexistent. We discuss clinical trials and/or end-of-life care. Regardless of her treatment choices, she dies in 6-12 months. Her death is protracted, usually from starvation, due to multiple bowel obstructions. Ideally, pain is controlled.

### ***5 Year Survival Rates***

The following are 5-year survival rates according to the American Cancer Society Website. As the new FIGO staging just started in 2014, 5-year data is not yet available.

I 78%

IA 93%

IB 91%

IC 84%

II 61%

IIA 82%

IIB 72%

IIC 67%

III 28%

IIIA 63%

IIIB 53%

IIIC 41%

IV 19%<sup>2</sup>

Modern surgery and chemotherapy have changed the natural history of ovarian cancer. Late recurrence (after 5-year) is common. Ten-year survival does not mean cure. I have personally treated late recurrences after ten years of remission. Others have reported these findings as well. (Baldwin et al. 2012; Tewari et al. 2015)

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<sup>2</sup> <https://www.cancer.org/cancer/ovarian-cancer/detection-diagnosis-staging/survival-rates.html>

## OVARIAN CANCER GENETICS

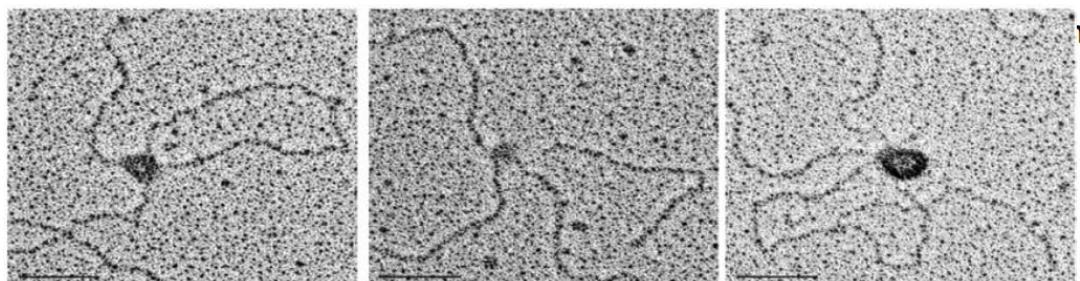
All cancer is genetic; that is, cancer involves DNA changes occurring in the chromosomes of a cell that was initially normal. For epithelial cancers, this is usually a series of mutations, DNA breaks, alterations (such as methylation), deletions, rearrangements or DNA amplification. These changes do not necessarily progress linearly. Watson reviewed some of these complexities in a recent article in *Nature*. (Watson et al. 2013).

A Cancer Genome Atlas Research Network (TCGA) study published in 2011 analyzed 489 high grade serous ovarian cancers (HGSOC). Exon sequencing of 316 of these tumors was performed. It identified the nearly universal (96%) presence of somatic mutations in the gene TP53 in HGSOC. That mutation seems to be a first step towards the development of EOC. Ovarian cancers occur in <3% of women with germline, heritable TP53 mutations; breast cancer is much more frequently occurring. (K. D. Gonzalez et al. 2009). Genes in homologous repair pathway were mutated in 49% (with better prognosis for those with germline mutations as opposed to somatic mutation or methylation). The FOXM1 transcription factor network was activated in 87%. This family of genes is involved in regulating cell cycle and differential gene expression. (Hannenhalli and Kaestner 2009; X. Chen et al. 2013).

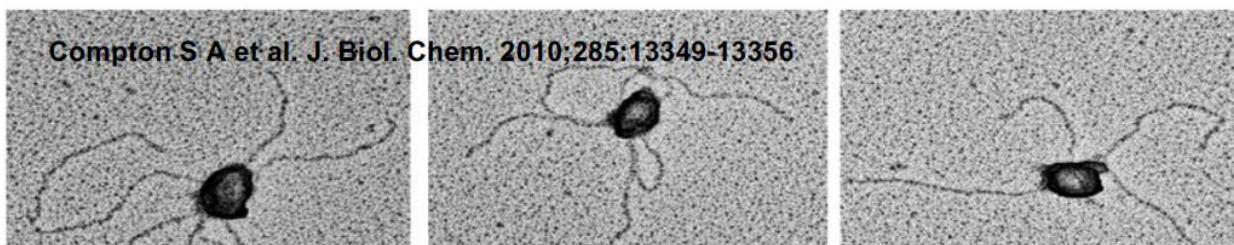
Interest in the homologous repair pathway has exploded since Mary Claire King's identification of what we now know to be the tumor suppressor gene, BRCA1. (Hall et al. 1990).

Homologous DNA repair is double stranded DNA repair breaks. This pathway includes multiple genes including BRCA1, BRCA2, Rad 51B, Rad 51C, Rad 51D, BRIP1, PALB2 and others. The protein products of this family of multiple genes work together to repair DNA. (Compton, Ozgür, and Griffith 2010; Thai et al. 1998). Binding of BCDX2 or CX3 to Holliday Junction DNA CX3 (A) or BCDX2 (B) was incubated with Holliday junction templates, mounted onto carbon-coated copper grids, and rotary shadowcast with tungsten for visualization by EM. Images are shown in reverse contrast. (Compton, Ozgür, and Griffith 2010).

A



B



The ring structure in A is a complex of Rad 51C and Xrcc3. The ring structure in B is a complex of Rad 51B, Rad 51 C, Rad 51D and Xrcc2.

Germline deficiencies in any of these genes have been shown to result in an increased risk of EOC. Why? Knudson answered that in simple terms (Knudson 1971). To be born deficient in one half of a DNA repair enzyme is to be born one step closer to cancer; target cancers appear earlier and more frequently. Many early studies note the increased incidence of breast cancer with BRCA1 and BRCA2 germline mutations carriers: over 80% by age 70. (Ford et al. 1998). They also give the increased risks of ovarian cancer: for BRCA1, 39% by age 70, and for BRCA2, 11% by age 70 studied 1915 patients with ovarian cancer and detected germline mutations in BRCA1 and BRCA2, RAD51B, Rad51D, PALB2, BARD1, BRIP1 (the HR repair pathway), as well as the genes involved in Lynch Syndrome. (Antoniou et al. 2003; Norquist et al. 2016).

**Penetrance** is the phenotypic expression of underlying genetic aberrations. Why does one woman with a BRCA1 mutation exhibit breast and/or ovarian cancer while another woman with the SAME mutation does not? Penetrance is influenced by environmental and genetic factors. For example, epidemiologic studies have shown that breast feeding and tamoxifen use decrease the risk of manifesting breast cancer in carriers of BRCA1 mutations. (Friebel, Domchek, and Rebbeck 2014). This same review and meta-analysis shows that oral contraceptives use decreases risk for ovarian cancer in BRCA1 and BRCA2 mutation carriers. Other known risk factors can interact with individuals who have an inherited gene mutation to increase the risk. In other words, women with BRCA and other hereditary gene mutations, are at least as susceptible to other reproductive, environmental, or inflammatory risk factors as women who do not have mutations. This would be expected with BRCA mutation carriers exposed to talcum powder products.

Factors that decrease penetrance may be external or environmental factors, as mentioned above, or may be intrinsic factors, genetic, or epigenetic. Rebbeck et al. demonstrated that the location of the mutation in these huge BRCA genes is a determinant of risk of manifestation of breast and/or ovarian cancer. (Rebbeck et al. 2015). Genetic and epigenetic modifiers became the focus of the CIMBA (Consortium of Investigators of Modifiers of BRCA1/2). (CIMBA et al. 2007). This international consortium of sixty groups of researchers are identifying genetic modifiers to BRCA breast and ovarian cancer risks as single nucleotide polymorphisms (SNPs) in nonBRCA genes. (Ding et al. 2012; Ramus et al. 2012). Such SNPs modify penetrance. Epigenetic changes such as methylation in promoter regions of genes also affect risk of ovarian cancer development.

## EPIDEMIOLOGICAL STUDIES

The first epidemiological study was published in 1982 by Cramer, et al, Cancer (1982) 50:372 “Ovarian Cancer and Talc: A Case-Control Study.” (D. W. Cramer et al. 1982). Since that time, there have been numerous additional epidemiological studies.

### ***The Meta-analyses and Pooled Study***

Harlow et al, 1992:

This study (of which Cramer is a coauthor) offers the first meta-analysis of the perineal talcum powder use and risk of ovarian cancer in their case-control study of 235 Boston-area women hospitalized in ten area hospitals. Controls were selected from the population and generated from “townbooks” by random number generation selecting the book page and age matched. “Ever” perineal talcum powder use vs none generated a OR of 1.5 (95% CI 1.0-2.1). The meta-analysis follows:

**Table 6. Odds Ratios With 95% Confidence Intervals of Ovarian Cancer in Relation to Any Perineal Exposure to Talc as Reported in Previous Epidemiologic Studies**

Author(s) (year)	Cases		Controls		Crude OR	95% CI
	Total	Talc exposure	Total	Talc exposure		
Cramer et al <sup>4</sup> (1982)	215	92 (42.8%)	215	61 (28.4%)	1.9	1.3-2.9
Hartge et al (1983)*	135	67 (49.6%)	171	100 (58.5%)	0.7	0.4-1.1
Whittemore et al <sup>5</sup> (1988)	188	98 (52.1%)	539	248 (46.0%)	1.4	0.9-2.0
Harlow and Weiss <sup>6</sup> (1989) <sup>†</sup>	116	49 (42.2%)	158	64 (40.5%)	1.1	0.7-2.1
Booth et al <sup>7</sup> (1989)	217	141 (65.0%)	434	256 (59.0%)	1.3	0.9-1.9
Harlow et al (1992) (current study)	235	114 (48.5%)	239	94 (39.3%)	1.5	0.9-1.8
All studies <sup>‡</sup>	1106	561 (50.7%)	1756	823 (46.9%)	1.3	1.1-1.6

The authors conclude that “there is an association, albeit modest, between ovarian cancer and peritoneal talc use” They state that this association may be due to asbestos contamination in talcum powder produced before 1976. This study was supported by an NCI grant. (Harlow et al. 1992).

Gross and Berg, 1995

These investigators analyzed 9 case-control studies (D. W. Cramer et al. 1982; Hartge et al. 1983; Whittemore et al. 1988; Booth, Beral, and Smith 1989; Harlow and Weiss 1989; Y. Chen et al. 1992; Harlow et al. 1992; Rosenblatt, Szklo, and Rosenshein 1992; Tzonou et al. 1993) and combined those studies with preliminary (and mathematically manipulated) data from Hankinson et al's 1993 report on the Nurses' Health Study. The Nurses' Health Study was not completed until 1996; talc use was not queried in the first 8 years of the study. By Gross' and Berg's estimate the RR of “ever genital talc use” vs “never” use is 0.6 (95%CI 0.38-1.02). In fact, that is a low RR as the Nurses' study showed an overall RR of ever vs never use and epithelial ovarian cancer of 1.09 (95% CI 0.86-1.37). (Gertig et al. 2000, see below).

192 *Gross and Berg***TABLE 3. Results of the Meta-Analyses**

Analysis	Studies used	<i>Q</i> (degrees of freedom)	RR (95% CI)
Crude risk, both tumor types	All	11.884 (8)	1.27 (1.09–1.48)
Adjusted risk, both tumor types	CRAM, HART, WHIT, HAR1, HAR2, CHEN, and TZON	9.043 (6)	1.31 (1.08–1.58)
Crude risk, epithelial tumors	HART, WHIT, BOOT, HAR2, ROSE, CHEN, and TZON	7.19 (6)	1.20 (1.01–1.44)
Adjusted risk, epithelial tumors	HART, WHIT, HAR2, CHEN, and TZON	7.598 (4)	1.29 (1.02–1.63)

The authors demonstrated that “all meta-analyses arrive at relative risks greater than 1.0 with 95% confidence intervals excluding the null.” Despite these findings, the authors conclude that “existing evidence linking talc exposure to an increased risk of ovarian cancer cannot be viewed as scientifically conclusive”. A dose response relationship is not demonstrated. This study was supported by Johnson and Johnson. (Gross and Berg 1995).

Cramer et al, 1999

In 1999, Cramer et al (with Harlow as a coauthor) published a new case-control study of 563 epithelial ovarian cancers, including 86 serous borderline tumors. Controls were 523 women. No increased risk of ovarian cancer was seen in never users of powder vs non-genital powder users. For those who never used or had nongenital powder use vs any genital use, the odds ratio was 1.60 (95% CI 1.18-2.15) for development of ovarian cancer. Adjustments for age, community, parity, oral contraceptive use, BMI, and family history of breast or ovarian cancer were made.

These authors then did meta-analysis with the following results:

Author	Risk of ovarian cancer with perineal exposure to talc from key epidemiologic studies.				Odds ratios and confidence				
	Cases Total n	Exposed (%)	Controls Total n	Exposed (%)	Crude OR (95% CI)	.1	.5	1	2
Cramer <i>et al.</i> (1982)	215	(42.8)	215	(28.4)	1.9 (1.3-2.8)				
Hartge <i>et al.</i> (1983)	135	(49.6)	171	(58.5)	0.7 (0.4-1.1)				
Whittemore <i>et al.</i> (1988)	188	(52.1)	539	(46.0)	1.3 (0.9-1.8)				
Harlow and Weiss (1989)	116	(42.2)	158	(40.5)	1.1 (0.7-1.7)				
Booth <i>et al.</i> (1989)	217	(65.0)	434	(59.0)	1.3 (0.9-1.8)				
Harlow <i>et al.</i> (1992)	235	(48.5)	239	(39.3)	1.4 (1.0-2.1)				
Rosenblatt <i>et al.</i> (1992)	77	(87.0)	46	(88.0)	1.0 (0.3-3.0)				
Chen <i>et al.</i> (1992)	112	(6.2)	224	(2.2)	2.9 (0.9-9.4)				
Tzonou <i>et al.</i> (1993)	189	(3.2)	200	(3.5)	0.9 (0.3-2.7)				
Purdie <i>et al.</i> (1995)	824	(56.7)	860	(52.0)	1.2 (1.0-1.5)				
Shushan <i>et al.</i> (1996)	200	(10.5)	408	(5.6)	2.0 (1.0-3.6)				
Cook <i>et al.</i> (1997)	313	(50.8)	422	(39.3)	1.6 (1.2-2.1)				
Chang and Rish (1997)	450	(44.0)	564	(35.6)	1.4 (1.1-1.8)				
Cramer <i>et al.</i> (1999)	563	(27.0)	528	(18.2)	1.7 (1.2-2.2)				
Summary odds ratio (95% confidence interval)					1.4 (1.2-1.5)				

Cramer et al. conclude that “a consistent association between talc and ovarian cancer appears unlikely to be explained by recall bias or confounding” (page 356). This study, too, was supported by a grant from the National Cancer Institute. (Cramer 1999).

Huncharek et al, 2003

Sixteen case control studies (Booth, Beral, and Smith 1989; C.-J. Chang et al. 2017; Y. Chen et al. 1992; Cook, Kamb, and Weiss 1997; D. W. Cramer et al. 1982; D. W. Cramer 1999; Godard et al. 1998; Harlow and Weiss 1989; Ness et al. 2000; Purdie et al. 1995; Rosenblatt, Szklo, and Rosenshein 1992; Tzonou et al. 1993; Whittemore et al. 1988; Wong 1999) were found to be homogeneous and delivered 11,933 subjects (4959 cases). Pooled meta-analysis of ever perineal talcum powder use versus no exposure “yielded a summary relative risk of 1.33 with a 95% confidence interval of 1.16-1.45, a statistically significant result suggesting a 33% increased risk of developing ovarian cancer”. No dose response was found. However, the study did not collect the necessary data to permit this determination. Huncharek et al. spend the rest of the paper dismissing their result as NOT supporting an association between talc and ovarian cancer. According to the disclosure, this research was partially supported by the Marshfield Medical Research Foundation. There was no mention of financial support from Johnson & Johnson or Imerys (although disclosed in a 2007 paper by the same authors – Huncharek 2007).

Langseth et al 2008

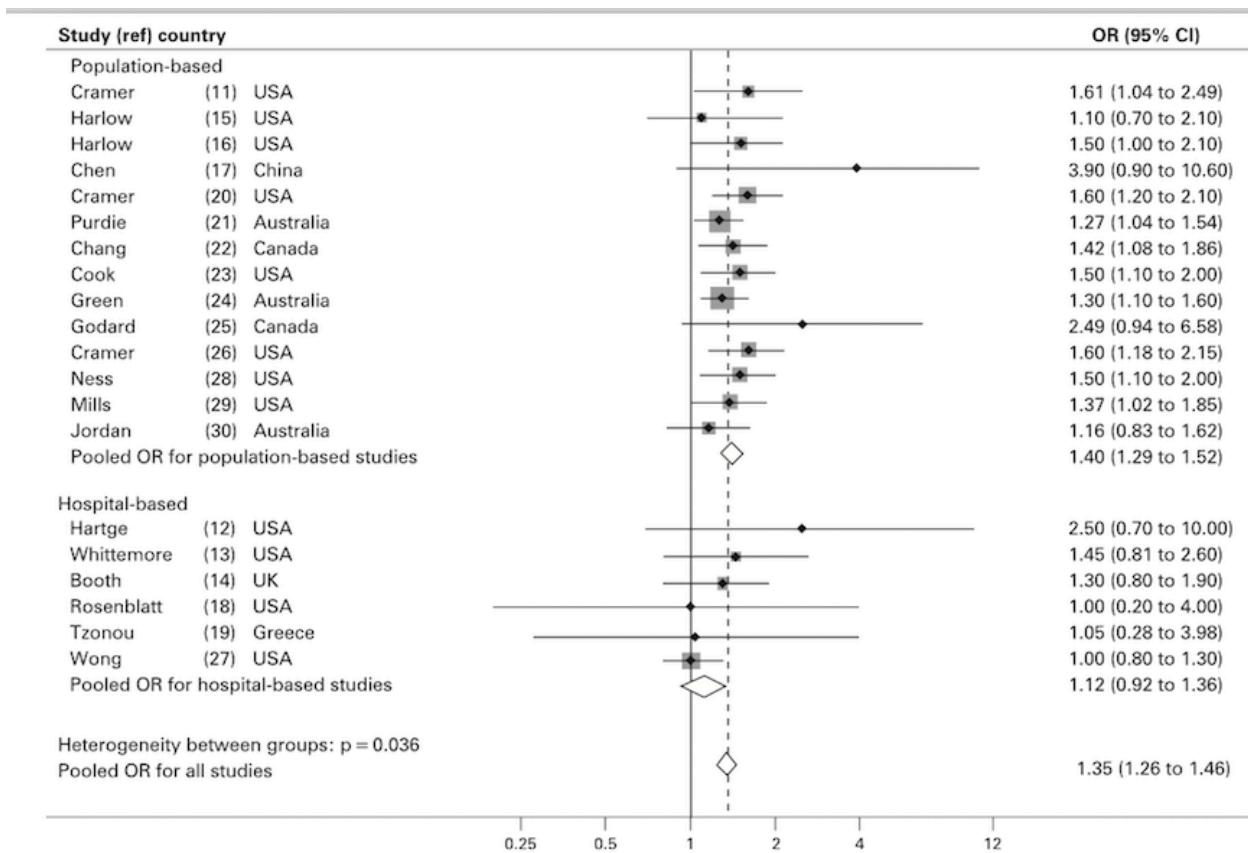
The Langseth study drew data from The International Agency on Cancer Research (IARC) review of the literature, published as a Monograph in 2010 (which classified non-asbestiform talc as possibly carcinogenic)<sup>3</sup>, but did not provide a comprehensive report on this review or the findings. IARC was founded in 1965 and comprises investigators from 25 countries who “promote international collaboration in cancer research” (IARC.fr website). Langseth found an OR of 1.35 (95% CI1.26-1.46), suggesting a statistically significant increase in ovarian cancer risk and concluded that “epidemiological evidence suggests that the use of cosmetic talc in the perineal area may be associated with ovarian cancer risk. Langseth commented in the high degree of consistency in the studies reviewed and proposed that “the mechanism of carcinogenicity may be related to inflammation.”

See insert below.

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<sup>3</sup> IARC defines Group 2B as follows: Group 2B: The agent is possibly carcinogenic to humans. This category is used for agents for which there is limited evidence of carcinogenicity in humans and less than sufficient evidence of carcinogenicity in experimental animals. It may also be used when there is inadequate evidence of carcinogenicity in humans but there is sufficient evidence of carcinogenicity in experimental animals. In some instances, an agent for which there is inadequate evidence of carcinogenicity in humans and less than sufficient evidence of carcinogenicity in experimental animals together with supporting evidence from mechanistic and other relevant data may be placed in this group. An agent may be classified in this category solely on the basis of strong evidence from mechanistic and other relevant data. (IARC 2012).

Langseth et al, 2008



**Figure 1** Results from case-control studies contributing data on perineal talc use and ovarian cancer. Results are presented as odds ratios (ORs) and their corresponding confidence intervals (95% CIs) and represented by squares and lines, respectively. Results are separated in 14 population-based and six hospital-based case-control studies. Pooled ORs for all population-based studies combined and all hospital-based studies combined are given OR pooling by fixed effect models (Mantel-Haenszel method).

- 11=Cramer et al, 1982
- 15=Harlow and Weiss, 1989
- 16=Harlow et al, 1992
- 17=Chen et al, 1992
- 20=Cramer and Xu, 1995
- 21=Purdie et al, 1995
- 22=Chang and Risch, 1997
- 23=Cook et al, 1997
- 24=Green et al, 1997
- 25=Godard et al, 1998
- 26=Cramer, 1999
- 28=Ness et al, 2000
- 29=Mills, et al, 2004
- 30=Jordan et al, 2007
- 12=Hartge et al, 1983
- 13=Whittemore et al, 1988
- 14=Booth et al, 1989

- 19=Tzonou et al, 1993
- 27=Wong et al, 1999
- 18=Rosenblatt et al, 1992

The Langseth et al study was financed by the Cancer Registry of Norway.

Terry et al, 2013

The Ovarian Cancer Association Consortium, an international, multidisciplinary group, investigates factors related to ovarian cancer development, including case-control studies and identification and analysis of genes associated with cancer risk. It is supported, in part, by the Ovarian Cancer Research Fund, the United States National Cancer Institute, and Cancer Research UK. Raw data from the following studies were pooled and analyzed: Rosenblatt et al, 2011 (including previously unpublished additional patients and data), Goodman et al, 2008 (previous unpublished data on powder use), Lo-Ciganic et al, 2012 (previously unpublished data on powder use), Moorman et al, 2009 (adding previously unpublished patients and data), Cramer et al , 1999 (with additional patient data), Pike et al, 2004 (previously unpublished powder use data), Merritt et al, 2008 (with additional patient data), and Chang et al, 1997 (including previously unreported patient data). Cofounders adjusted for include age, oral contraceptive use and duration, parity, tubal ligation, BMI, race/ethnicity. The cases were 8525 cases of ovarian, fallopian tube, and primary peritoneal cancer, reflecting the recognition, in the decade of the 2000s, of the overlap and similarity and possible common etiology of these differently named cancers. In this study, 31% of cases used genital powder, as opposed to 25% of controls. Comparing ever users of genital powder with never users, the OR was 1.24 (95% CI 1.15-1.33). Similar results were seen for genital use vs non-genital use of powder. Risks were stronger for patient with BMI < 30. There was no association with parity, OC use, tubal ligation status, or menopausal status. Histologic break down of the cases showed significant increased risk in both borderline (OR 1.29 [95% CI 1.14-1.48]) and invasive cancers (OR 1.21, [95%CI1.12-1.32]). Significant increased odds ratios with genital powder use were seen for invasive serous, endometrioid and clear cell tumors, but not invasive mucinous tumors. (Terry et al. 2013).

Penninkilampi and Eslick, 2017

The most recent meta-analysis is from two authors at the University of Sydney in New South Wales, Australia. The authors analyzed 24 case-control studies and 3 cohort studies on perineal talcum powder use and risk of development of ovarian study, excluding studies of fewer than 50 cases and duplicated published data. A total of 14,311 cases of ovarian cancer were included. Quality of the component studies were scored on the Newcastle-Ottawa Scale; none scored perfect, but the lowest score was 5/10, so none were excluded. Long term talcum powder use was judged greater than 10 years and was associated with an increase in ovarian cancer risk of OR=1.25 (95% confidence interval (CI) 1.10-1.43). (Lifetime applications of perineal talc of 3600 times roughly correlates with 10 years use; increased risk of ovarian cancer was found with fewer and more applications than 3600.) “Any perineal talc use was associated with any serous, serous invasive, serous borderline and endometrioid subtypes of ovarian cancer (Figure 2c).” This is the largest meta-analysis to date and continues to support the association of perineal talc use with increasing the risk of epithelial ovarian cancers. (Penninkilampi and Eslick 2018).

### ***The Prospective Cohort Studies***

There are three true prospective cohort studies looking at genital talcum powder use to perineum, diaphragms or menstrual pads or such use in some combination.

### Gertig 2000

The Nurses' Health Study (Gertig et al, 2000) is a 20-year duration study (1976-1996) of 78,630 nurses age 30-55 (in 1976) in the USA. Perineal talcum powder use was first queried in 1982. The cohort answered questionnaires every other year. Ovarian cancer developed in 307 nurses. The relative risk (RR) for ever use of talcum powder and development of any epithelial ovarian cancer was 1.09 (95% CI 0.86-1.37). Invasive serous ovarian cancer demonstrated a statistically significant elevated multivariate RR of 1.40 (95% CI 1.02-1.9) (controlled for age, parity, duration of oral contraceptive use, BMI, tubal ligation, smoking and menopausal status). No other histologic group (all serous including borderline tumors, endometrioid or mucinous tumors) showed elevated risk with appropriate confidence intervals. Within this study there was no dose-response demonstrated, although P for trend was 0.5. For users over 45 years old in 1982 RR for serous ovarian cancer was 1.51 (95% CI 1.07-2.15). No such increased relative risk for any ovarian cancer type was seen for those under 45 in 1982. Gates (2010) continues the analysis of the NHS, finding no increased risk of any subtype. (Gertig et al. 2000).

### Houghton 2014

The Women's Health Initiative Study was published by Houghton et al in 2014. This study of 61,576 postmenopausal women (age 50-79) showed ever-talc-use (perineal, diaphragm, pad) was not associated with statistically significant increased risk of development of any ovarian cancer contrasted to never-use (Hazard ratio=1.12 [95% CI 0.92-1.23]). There were 429 incident cases of ovarian cancer over the 12+ years of this study. In this study, talc use in any form was combined, no histologic information was obtained, and information on frequency of use was not obtained. (Houghton et al. 2014).

### Gonzalez 2016

Gonzalez et al, 2016 studied a cohort of sisters or half-sisters of breast cancer patients in the USA. After exclusions, (BSO, missing data), 41,654 women were followed a median of 6.5 years during which 135 ovarian cancer, 5 fallopian tube cancers and 4 peritoneal cancers were diagnosed. Eight other cancers were likely from one of these three sites. (Only 96 cases of cancer were verified by medical record or death certificate review; all other were solely patient-reported at annual questionnaire responses.) At entry, the participants completed questionnaires regarding genital talc use as powders or spray and its frequency and douching. Perineal powder use was inversely associated with the development of ovarian-type cancer (Hazard ratio=0.73 (95% CI 0.42-1.1). Douching during the 12 months prior to study entry was associated with an increased risk of ovarian cancer (HR=1.8 [95% CI 1.2-2.8]), while combined talc and douching in the 12 months antecedent to study entry resulted in an HR=1.8 (95%CI 0.81-3.9). The authors acknowledge that they cannot know which powders contained talc and admit "powder has changed over time..." Additional limitations include small numbers, failure to ask questions about frequency or duration of powder usage, and short-term follow-up. With an expected latency period of over twenty years, this study would not pick up all cases. All of these deficiencies result in a failure to capture the true risk. (Gonzalez et al. 2016).

## ***The Case-Control Studies***

Cramer et al.'s landmark 1982 case control study looked at perineal talcum powder use in 215 white patients with epithelial ovarian cancer matched by age, race, and residence to 215

community women. These 215 cases included 39 borderline tumors. All pathology was histologically reviewed. Cases and controls were interviewed as to talc exposure from surgical glove, diaphragm use, and perineal use and/or dusting menstrual pads. Talc use varied between cases (42.8%) and controls (28.4%). Any perineal talc exposure showed an adjusted relative risk of ovarian cancer of 1.92 (95% confidence limits 1.27-2.89). (This relative risk was adjusted for parity and menopausal status.)

In the ensuing thirty-five years, at least 24 case-control studies looking at the association of talc and ovarian cancer, both invasive and borderline, have been published. Studies vary in design quality and size, but show a consistent increased risk of ovarian cancer with genital talcum powder use. That data summary follows and is attached as Exhibit B.

Based on the limitations of the cohort studies and the variances in design and size of the case-control studies, I based my opinions largely on the meta-analyses, particularly Penninkilampi's most recent study. In my opinion, meta-analysis provides the most reliable evidence in this situation. The large number of overall cases (>14,000) in this study improves the power to detect a relatively small effect size. The authors agree: "As it stands, a meta-analysis of observational studies, such as the present study provides the highest level of evidence practically feasible for this research question." (Penninkilampi and Eslick 2018).

In my opinion, meta-analysis is the most valid and reliable way to study an issue like ovarian cancer, that is relatively rare and requires a long study period to detect. The cohort studies were not designed to specifically to look at talcum powder. Instead, the use of talcum powder is only one of many queries. All of the cohort studies are limited by failure to obtain complete information, lack of power, selection bias, and short follow-up.

When looking at epidemiological studies with a critical eye and in their totality, they demonstrate a clear, consistent, and statistically significant increased risk of EOC (approximately 20-50%) with the genital use of talcum powder products. This risk is replicated over a large number of case-control studies, one cohort study, and all meta-analyses/pooled analyses over several decades. Recall and confounding bias in case-control studies appear to have minimal impact. (Penninkilampi and Eslick 2018; Langseth et al. 2008). There appears to be no significant publication bias. (Berge et al. 2017; Penninkilampi and Eslick 2018).

## MECHANISM

### ***How Talc Particles Reach the Tube, Ovary and Peritoneum***

In 1971, Henderson, et al of Cardiff, Wales published their findings of talc deeply embedded in ovarian cancers. (Henderson et al. 1971)(Talc was also demonstrated in cervical cancers, endometrial cancers and non-diseased ovaries.) Ten years previously, Egli and Newton had demonstrated that carbon particles instilled in the posterior vaginal fornix would be "flushed" from the fallopian tubes removed transabdominally (No propulsive force of talc introduction was used in this study). (Egli and Newton 1961). Glove powder from vaginal examination can be found in the peritoneal cavity one to four days after exam. (Sjösten, Ellis, and Edelstam 2004). Based on the studies of Egli and others, Dr. J. Donald Woodruff began to postulate that "some agent enters the peritoneal cavity through the fallopian tube, irritates the pelvic peritoneum,

produces proliferation and with an added unknown ingredient results in the development of malignancy.” (Woodruff 1979). Dr. Woodruff emphatically encouraged more scientific attention to agents introduced into the vaginal canal. This paper is the text of a lecture delivered in October of 1978. Drs. Longo and Young expressed their concerns about talc and pathogenesis of ovarian cancer and also encouraged further study of the risks of cosmetic talc use in women. (D. L. Longo and Young 1979). Although I reviewed the small number of articles that dispute talcum powder’s ability to reach the tubes and ovaries, I rejected these claims. It is a universally accepted phenomenon by the gynecologic medical community, well documented in the scientific and medical literature, that the female genital tract functions as a conduit for foreign material to enter the peritoneal cavity. This is the process that occurs with talcum powder.

### ***How Inflammation Leads to Mutagenesis and Cancer***

“Prolonged chemical exposures, persistent foreign bodies, recurrent acute inflammation or certain pathogens are all causes of chronic inflammation.” (Ferguson, Chronic inflammation and mutagenesis, 2010). In this milieu, cytokines are generated, particularly TNF-alpha and IL-1beta. These cytokines generate reactive oxygen species (ROS) and reactive nitrogen species (RNS). ROS are incompletely reduced oxygen compounds that travel through the cell hungrily seeking electrons to steal or donate. These TNF-alpha radicals are potent mutagens and are comparable to the effects of ionizing radiation. (Yan et al. 2006; Yan, Peng, and Li 2009) (Yan methods described in 2009 book chapter). These ROS radicals cause DNA breaks, DNA adducts as well as having epigenetic effects (for example, lysine acetylation in chromosomal histones). The generation of TNF-alpha is DNA synthesis dependent and occurs in the macrophage (a WBC first responder in inflammation). (Liou and Storz 2010; Ferguson 2010; Yan 2011).

Inflammation and its involvement in the etiology and development of many types of cancer, has been studied extensively. (Klampfer 2011).

The inflammatory basis for cancer development is also supported by studies showing a reduced risk of cancer with the use of anti-inflammatory agents. (Burn et al. 2011).

This inflammatory cascade has been shown to occur in the pathogenesis of EOC as well. (Shan and Liu 2009; Saed, Morris, and Fletcher 2018; Saed, Diamond, and Fletcher 2017, 2017; Saed et al. 2018; Khan et al. 2011; Trabert et al. 2014).

In the “normal” cell, DNA damage is either repaired or the damaged cell is directed via the P53 pathway to apoptosis. Yan et al (2006) found more DNA aberrations in homozygous p53-negative cells of colon cancer origin. (Yan et al. 2006). Gates et al (2008) document absence of some DNA repair mechanisms in patients who are genital talc exposed compare to controls in New England Case Control Study as well as the Nurses’ Health Study. (Gates et al. 2008).

In an *in vitro* study by Shukla (2009), crocidolite asbestos and non-fibrous talc caused expression of different genes in mesothelial cells and ovarian epithelial cells producing inflammatory cytokines. (Shukla et al. 2009).

Buz’Zard transformed normal ovarian epithelial cells to malignant cells by talc exposure. (2007). (Buz’Zard and Lau 2007). Her methods are supported by the works of Yan et al and Khan et al.

Harper and Saed have recently reported a mechanism by which talc enhances the pro-oxidant state in normal [ovarian and tubal] and ovarian cancer cells, through inductions of gene point mutations (SNPs) in key oxidant enzymes, altering their activities. (Harper and Saed 2019).

Multiple investigators have looked at the effects of aspirin and nonsteroidal anti-inflammatory drugs (NSAIDs) on the risk of developing ovarian cancer. Although somewhat inconsistent, data regarding NSAID and aspirin use suggest a protective effect (results of these studies are inconsistent. (Murphy et al. 2012; Trabert et al. 2014, 2019). In a case control study, use of NSAIDs increased the risk of ovarian cancer. (A. H. Wu et al. 2009). Trabert et al pooled 12 population based case-control studies regular aspirin use decreased the risk of ovarian cancer, both low dose and high dose. Daily high dose NSAIDs decreased ovarian cancer risk. (Trabert et al. 2014). Trabert et al looked at 15 prospective cohort studies from North America and Europe and found no effect of aspirin or NSAIDs on ovarian cancer risks. (Trabert et al. 2019). No study found an effect on ovarian cancer of acetaminophen use, an analgesic, antipyretic with no anti-inflammatory properties. Dixon et al found no correlation with pre-diagnosis aspirin or NSAID use and survival duration after the diagnosis of ovarian cancer. (Dixon et al. 2017)

## **ASBESTOS AND OTHER CONSTITUENTS**

There is evidence from medical literature that talcum powders are not pure talc, but contain impurities including asbestos. (Cralley, Key, et al. 1968; Cralley, Keenan, et al. 1968; Rohl et al. 1976; Werner 1982; Lockey 1981; Paoletti et al. 1984; Blount 1991). I have also seen evidence of testing of Johnson and Johnson talcum powder products by Dr. William Longo demonstrating the presence of asbestos and fibrous talc in talcum powder product samples. (W. E. Longo and Rigler 2018). In addition, I have seen numerous Johnson and Johnson testing results showing the presence of asbestos in their talcum powder products. (Exhibit 28, Deposition of John Hopkins, Ph.D., MDL No. 2378, 2018; Exhibit 47, Deposition of Julie Pier, MDL No. 2738, 2018).

Asbestos is well known to be one of the most potent human carcinogens. The International Agency for Research in Cancer (IARC) has determined that asbestos causes mesothelioma and cancer of the lung, larynx, and ovary. IARC 2012. According to IARC, all forms of asbestos (chrysotile, crocidolite, amosite, tremolite, actinolite, and anthophyllite and talc containing asbestos fibers (fibrous talc) are carcinogenic. The IARC Working Group found that a “causal association between exposure to asbestos and cancer of the ovary was clearly established, based on five strongly positive studies in women with heavy occupational exposure to asbestos. (Acheson et al. 1982; Wignall and Fox 1982; Germani et al. 1999; Berry, Newhouse, and Wagner 2000; Magnani et al. 2008; IARC 2012). The IARC 100C Working Group was convened in 2009, with results published in 2012.

In 2011, Camargo et al, published a meta-analysis of epidemiologic studies of ovarian cancer in asbestos exposed women. (Camargo et al. 2011). Their finding of a standardized mortality ratio (SMR) of 1.77 for risk of ovarian cancer mortality (95% confidence intervals 1.37-2.28) corroborate the finding of the IARC Working Group.

Distinction of peritoneal mesothelioma and ovarian carcinomatosis can be difficult. Even with such discrimination, asbestos increases ovarian cancer risk. (Alison Reid, Klerk, and Musk 2011).

“Consumer products are the primary sources of exposure to talc for the general population. Inhalation and dermal contact (i.e. through perineal application of talcum powders) are the primary routes of exposure”. (IARC 2012). The mechanism of carcinogenesis of asbestos is the same as discussed above: induction of the inflammatory cascade resulting in mutagenesis either through a direct or indirect mechanism. Although migration/transport through the genital tract is the primary source of exposure with genital talcum powder use, inhalation represents a secondary exposure route. With either route, talcum powder particles can be also absorbed and transported through the lymphatics or blood system to pelvic organs and lymph nodes. The mechanism for the carcinogenicity of asbestos in the ovary and elsewhere provides a plausible biological mechanism by which it can contribute to the carcinogenicity of talcum powder products.

I have also seen evidence of the presence of heavy metals, including nickel, cadmium, and cobalt in Johnson and Johnson talcum powder products. (Exhibit 47, Deposition of Julie Pier, MDL 2738, 2018). Nickel and chromium are Group 1 carcinogens. (IARC 2012). Cobalt is identified by IARC as Group 2b possibly carcinogenic. (IARC 2012). The mechanism of action described by IARC, is inflammatory in nature. These heavy metals likely contribute to the carcinogenicity of talcum powder products by the inflammatory mechanism described at length in this report.

I have reviewed the list of fragrances chemicals contained in Johnson’s Baby Powder and Shower to Shower products and the expert report of Dr. Michael Crowley. I agree with Dr. Crowley’s opinion that these chemicals likely contribute to the inflammatory properties, toxicity and/or carcinogenicity of these products.

## **DETERMINATION OF CAUSATION**

In 1965, epidemiologist Sir Austin Bradford Hill published his factors for determining causation from associations found in epidemiologic studies. (Hill 1965). These factors have been widely used, but are not considered absolute or required for a causal determination. These considerations have also been elaborated upon for the 21<sup>st</sup> century by Fedak et al. (Fedak et al. 2015). For a doctor treating patients, knowledge of risk factors and causes of diseases are important for diagnosis, prevention, and treatment of the diseases. In essence, risk factors (associated with a health outcome) can be considered causal when the biological and molecular mechanisms for this relationship are known or predictable based on scientific research. The following are the Bradford Hill considerations and my analysis as they relate to talcum powder products and their relationship with ovarian cancer.

**Strength:** There is no set magnitude or threshold for ascribing causality. I would maintain that any practice or element that increases the risk of ovarian cancer by ANY consistent percentage is significant. Ovarian cancer is, usually, a fatal disease, not a trivial inconvenience. The increased risk of ovarian cancer in perineal talc users in epidemiologic studies is 1.2-1.5, a 20-50% increased risk.

Consistency: The consistency of the case-control epidemiologic studies the uniformity of the meta-analyses (Harlow et al, 1992, Gross and Berg, 1995, Cramer et al 1999, Huncharek et al 2003, Langseth et al, 2008, the pooled study of Terry et al 2013, and the recent Penninkilampi 2017) is impressive. The studies are from different populations across three continents. The seeming inconsistency with the cohort studies are likely due to lack of power and other study design limitations. (Narod 2016). Strength and consistency are very important to a physician involved in patient care.

Specificity: Bradford Hill noted that different agents may cause more than one disease. Furthermore, any disease may have multiple component causes. “One-to-one relationships are not frequent”. (Hill 1965). Certainly, talc causes talcosis and medically induced pleural inflammation. The body of epidemiologic work supports talcum powder’s role in risk of epithelial ovarian cancer. For a physician, this consideration is less important than strength of association and consistency.

Temporality: This requirement is met by studies of risk of ovarian cancer for those who used talcum powder versus those who did not. It may take in vitro studies to establish threshold dose exposures. Bradford Hill did not address latency which is another marker of temporality. In the case of talcum powder use and ovarian cancer, the average latency period exceeds twenty years. (Magnani et al. 2008; A. Reid et al. 2014; Okada 2007). Reverse temporality is most unlikely in this case. Temporality is not particularly important to a physician as long as it has been shown to exist.

Biologic gradient: This refers to dose response relationship which is not seen in all of the epidemiologic studies, but is demonstrated in some. (Harlow et al. 1992; S. Chang and Risch 1997; Daniel W. Cramer et al. 2016; Schildkraut et al. 2016; Terry et al. 2013; Penninkilampi and Eslick 2018). In the studies that failed to demonstrate a clear dose response, many simply did not have adequate data to assess. With genital talcum powder use, quantifying exposure is challenging in terms of measuring the exact amount used in each application, the amounts that migrate or are transported through the genital tract, the amount inhaled, and the amount absorbed through the vaginal mucosa. It is also impossible to measure how much of each constituent is present in any application. In vitro studies would help clarify dose response relationships and mechanisms. To a physician, dose response can be helpful when determining causality, but not essential.

Plausibility: The growing body of evidence from in vitro studies enhance the plausibility of talcum powder’s role in the causation of ovarian cancer. The talcum powder reaches the tubes, ovaries, and peritoneum by migration/transport of particles as described earlier in this report. Once there, these particles create a hostile inflammatory environment of reactive oxygen and reactive nitrogen species capable of causing mutagenesis/carcinogenesis. This general mechanism is not only plausible, but accepted widely - even though the details at the molecular level are still being clarified. I placed a great deal of importance on the mechanism consideration and I find it compelling.

Coherence: As Bradford Hill stated, assessing causation “should not seriously conflict with the generally known facts of natural history and biology of disease”. (Hill 1965). This consideration has been satisfied, since talcum powder and its causal relationship with ovarian cancer is compatible with our knowledge of cancer and cancer processes.

Experiment: Sir Bradford Hill discussed this point as an experimental change in the epidemiologic milieu which mitigated the statistical finding. Fedak et al interpret this point in a more contemporary way: biochemical, in vitro experiments and laboratory investigation of genetic and epigenetic pathways. (Fedak et al. 2015). In this context, there is a growing body of evidence to support the biologic, genetic and epigenetic consequences to the ovarian epithelial cell with talcum powder exposure. (Shukla et al. 2009; Fletcher, Nicole, Memaj, Ira, and Saed, Ghassan 2018; Saed, Morris, and Fletcher 2018; Buz’Zard and Lau 2007).

Analogy: Sir Bradford Hill suggested the analogy of rubella and thalidomide causing birth defects in a similar fashion. I would suggest the analogy of asbestos causing ovarian cancer and mesothelioma or HPV causing cervical cancer.

I give precedence to strength of association and consistency as most important factors. If these are met, I judge plausibility and experiment next in importance.

### **Cornstarch as a safer alternative**

Talc has been known to be more inflammatory and toxic than starch products for decades. (Eberl and George 1948). In addition, there is no epidemiological evidence linking cornstarch to ovarian cancer. (S. Chang and Risch 1997; Daniel W. Cramer et al. 2015; Cook, Kamb, and Weiss 1997). Whysner and Mohan reviewed the literature regarding talc and cornstarch and their relationship to epithelial ovarian cancer. The authors concluded that: 1) due to the chemical nature of cornstarch, a biological mechanism by which cornstarch could cause ovarian cancer is implausible; 2) epidemiologic studies have found no association between cornstarch and ovarian cancer; and 3) no increased risk of ovarian cancer from perineal cornstarch use is predicted. (Whysner and Mohan 2000).

### **Conclusions**

In my opinion, talcum powder products cause epithelial ovarian cancer. This opinion is based on my assessment of the totality of the epidemiologic data presented in the medical and scientific literature, the biologic mechanism, and the credible presence of known carcinogens in the products. This assessment was made by analyzing and weighing the extensive evidence in the context of Bradford Hill considerations.

Summary of my opinions:

1. Johnson and Johnson talcum powder products cause the development and progression of epithelial ovarian cancer.
2. There is credible evidence that Johnson and Johnson baby powder products contain asbestos. Asbestos and fibrous talc cause epithelial ovarian cancer. Heavy metals and

fragrance chemicals added to the products can also contribute to the carcinogenicity of Johnson & Johnson Baby Powder and Shower to Shower products.

3. Talc and asbestos create an inflammatory pro-carcinogenic environment in the human body, the mechanism for epithelial ovarian cancer development and progression.
4. Perineal application of talcum powder products results in the tubal and intraperitoneal deposition of talc and asbestos by migration and transport through the genital tract. Inhalation is a secondary route of exposure.

I reserve the right to amend or modify the report as new information becomes available.

I have not testified in litigation over the previous 4 years. I am charging \$600 per hour for my work on this matter. Additional materials I considered are attached as Exhibit C.

## References

Acheson, E D, M J Gardner, E C Pippard, and L P Grime. 1982. "Mortality of Two Groups of Women Who Manufactured Gas Masks from Chrysotile and Crocidolite Asbestos: A 40-Year Follow-Up." *British Journal of Industrial Medicine* 39 (4): 344–48.

Antoniou, A., P. D. P. Pharoah, S. Narod, H. A. Risch, J. E. Eyfjord, J. L. Hopper, N. Loman, et al. 2003. "Average Risks of Breast and Ovarian Cancer Associated with BRCA1 or BRCA2 Mutations Detected in Case Series Unselected for Family History: A Combined Analysis of 22 Studies." *American Journal of Human Genetics* 72 (5): 1117–30.

Armstrong, Deborah K., Brian Bundy, Lari Wenzel, Helen Q. Huang, Rebecca Baergen, Shashikant Lele, Larry J. Copeland, Joan L. Walker, Robert A. Burger, and Gynecologic Oncology Group. 2006. "Intraperitoneal Cisplatin and Paclitaxel in Ovarian Cancer." *The New England Journal of Medicine* 354 (1): 34–43. <https://doi.org/10.1056/NEJMoa052985>.

Baldwin, Lauren A., Bin Huang, Rachel W. Miller, Thomas Tucker, Scott T. Goodrich, Iwona Podzielinski, Christopher P. DeSimone, Fred R. Ueland, John R. van Nagell, and Leigh G. Seamon. 2012. "Ten-Year Relative Survival for Epithelial Ovarian Cancer." *Obstetrics and Gynecology* 120 (3): 612–18. <https://doi.org/10.1097/AOG.0b013e318264f794>.

Berge, Wera, Kenneth Mundt, Hung Luu, and Paolo Boffetta. 2017. "Genital Use of Talc and Risk of Ovarian Cancer: A Meta-Analysis." *European Journal of Cancer Prevention*, January, 1. <https://doi.org/10.1097/CEJ.0000000000000340>.

Berry, G., M. L. Newhouse, and J. C. Wagner. 2000. "Mortality from All Cancers of Asbestos Factory Workers in East London 1933–80." *Occupational and Environmental Medicine* 57 (11): 782–85.

Blount, A M. 1991. "Amphibole Content of Cosmetic and Pharmaceutical Talc." *Environmental Health Perspectives* 94 (August): 225–30.

Booth, M., V. Beral, and P. Smith. 1989. "Risk Factors for Ovarian Cancer: A Case-Control Study." *British Journal of Cancer* 60 (4): 592–98.

Burn, John, Anne-Marie Gerdes, Finlay Macrae, Jukka-Pekka Mecklin, Gabriela Moeslein, Sylviane Olschwang, Diane Eccles, et al. 2011. "Long-Term Effect of Aspirin on Cancer Risk in Carriers of Hereditary Colorectal Cancer: An Analysis from the CAPP2 Randomised Controlled Trial." *Lancet (London, England)* 378 (9809): 2081–87. [https://doi.org/10.1016/S0140-6736\(11\)61049-0](https://doi.org/10.1016/S0140-6736(11)61049-0).

Buz'Zard, Amber R., and Benjamin H. S. Lau. 2007. "Pycnogenol Reduces Talc-Induced Neoplastic Transformation in Human Ovarian Cell Cultures." *Phytotherapy Research: PTR* 21 (6): 579–86. <https://doi.org/10.1002/ptr.2117>.

Camargo, M. Constanza, Leslie T. Stayner, Kurt Straif, Margarita Reina, Umaima Al-Alem, Paul A. Demers, and Philip J. Landrigan. 2011. "Occupational Exposure to Asbestos and Ovarian Cancer: A Meta-Analysis." *Environmental Health Perspectives* 119 (9): 1211–17. <https://doi.org/10.1289/ehp.1003283>.

Chang, Che-Jui, Yu-Kang Tu, Pau-Chung Chen, and Hsiao-Yu Yang. 2017. "Occupational Exposure to Talc Increases the Risk of Lung Cancer: A Meta-Analysis of Occupational Cohort Studies." *Canadian Respiratory Journal* 2017: 1270608. <https://doi.org/10.1155/2017/1270608>.

Chang, Stella, and Harvey A. Risch. 1997. "Perineal Talc Exposure and Risk of Ovarian Carcinoma." *Cancer* 79 (12): 2396–2401. [https://doi.org/10.1002/\(SICI\)1097-0142\(19970615\)79:12<2396::AID-CNCR15>3.0.CO;2-M](https://doi.org/10.1002/(SICI)1097-0142(19970615)79:12<2396::AID-CNCR15>3.0.CO;2-M).

Chen, Xi, Gerd A. Müller, Marianne Quaas, Martin Fischer, Namshik Han, Benjamin Stutchbury, Andrew D. Sharrocks, and Kurt Engeland. 2013. "The Forkhead Transcription Factor FOXM1 Controls Cell Cycle-Dependent Gene Expression through an Atypical Chromatin Binding Mechanism." *Molecular and Cellular Biology* 33 (2): 227–36. <https://doi.org/10.1128/MCB.00881-12>.

Chen, Y., P. C. Wu, J. H. Lang, W. J. Ge, P. Hartge, and L. A. Brinton. 1992. "Risk Factors for Epithelial Ovarian Cancer in Beijing, China." *International Journal of Epidemiology* 21 (1): 23–29.

Chien, Jeremy, Hugues Sicotte, Jian-Bing Fan, Sean Humphray, Julie M. Cunningham, Kimberly R. Kalli, Ann L. Oberg, et al. 2015. "TP53 Mutations, Tetraploidy and Homologous Recombination Repair Defects in Early Stage High-Grade Serous Ovarian Cancer." *Nucleic Acids Research* 43 (14): 6945–58. <https://doi.org/10.1093/nar/gkv111>.

CIMBA, Georgia Chenevix-Trench, Roger L Milne, Antonis C Antoniou, Fergus J Couch, Douglas F Easton, and David E Goldgar. 2007. "An International Initiative to Identify Genetic Modifiers of Cancer Risk in BRCA1 and BRCA2 Mutation Carriers: The Consortium of Investigators of Modifiers of BRCA1 and BRCA2 (CIMBA)." *Breast Cancer Research* 9 (2). <https://doi.org/10.1186/bcr1670>.

Compton, Sarah A., Sezgin Ozgür, and Jack D. Griffith. 2010. "Ring-Shaped Rad51 Paralog Protein Complexes Bind Holliday Junctions and Replication Forks as Visualized by Electron Microscopy." *The Journal of Biological Chemistry* 285 (18): 13349–56. <https://doi.org/10.1074/jbc.M109.074286>.

Cook, Linda S., Mary L. Kamb, and Noel S. Weiss. 1997. "Perineal Powder Exposure and the Risk of Ovarian Cancer." *American Journal of Epidemiology* 145 (5): 459–65.

Cralley, L. J., R. G. Keenan, J. R. Lynch, and W. S. Lainhart. 1968. "Source and Identification of Respirable Fibers." *American Industrial Hygiene Association Journal* 29 (2): 129–35. <https://doi.org/10.1080/00028896809343285>.

Cralley, L. J., M. M. Key, D. H. Groth, W. S. Lainhart, and R. M. Ligo. 1968. "Fibrous and Mineral Content of Cosmetic Talcum Products." *American Industrial Hygiene Association Journal* 29 (4): 350–54. <https://doi.org/10.1080/00028896809343015>.

Cramer, D. W. 1999. "Perineal Talc Exposure and Subsequent Epithelial Ovarian Cancer: A Case-Control Study." *Obstetrics and Gynecology* 94 (1): 160–61.

Cramer, D. W., W. R. Welch, R. E. Scully, and C. A. Wojciechowski. 1982. "Ovarian Cancer and Talc: A Case-Control Study." *Cancer* 50 (2): 372–76.

Cramer, Daniel W., Allison F. Vitonis, Kathryn L. Terry, William R. Welch, and Linda J. Titus. 2015. "The Association between Talc Use and Ovarian Cancer: A Retrospective Case-Control Study in Two US States." *Epidemiology (Cambridge, Mass.)*, December. <https://doi.org/10.1097/EDE.0000000000000434>.

—. 2016. "The Association Between Talc Use and Ovarian Cancer: A Retrospective Case-Control Study in Two US States." *Epidemiology (Cambridge, Mass.)* 27 (3): 334–46. <https://doi.org/10.1097/EDE.0000000000000434>.

Ding, Yuan C., Lesley McGuffog, Sue Healey, Eitan Friedman, Yael Laitman, Shani- Paluch-Shimon, Bella Kaufman, et al. 2012. "A Nonsynonymous Polymorphism in IRS1 Modifies Risk of Developing Breast and Ovarian Cancers in BRCA1 and Ovarian Cancer

in BRCA2 Mutation Carriers.” *Cancer Epidemiology, Biomarkers & Prevention: A Publication of the American Association for Cancer Research, Cosponsored by the American Society of Preventive Oncology* 21 (8): 1362–70. <https://doi.org/10.1158/1055-9965.EPI-12-0229>.

Dixon, Suzanne C., Christina M. Nagle, Nicolas Wentzensen, Britton Trabert, Alicia Beeghly-Fadiel, Joellen M. Schildkraut, Kirsten B. Moysich, et al. 2017. “Use of Common Analgesic Medications and Ovarian Cancer Survival: Results from a Pooled Analysis in the Ovarian Cancer Association Consortium.” *British Journal of Cancer* 116 (9): 1223–28. <https://doi.org/10.1038/bjc.2017.68>.

Dubeau, L., and R. Drapkin. 2013. “Coming into Focus: The Nonovarian Origins of Ovarian Cancer.” *Annals of Oncology: Official Journal of the European Society for Medical Oncology* 24 Suppl 8 (November): viii28–35. <https://doi.org/10.1093/annonc/mdt308>.

Eberl, J. J., and W. L. George. 1948. “Comparative Evaluation of the Effects of Talcum and a New Absorbable Substitute on Surgical Gloves.” *American Journal of Surgery* 75 (3): 493–97.

Egli, G. E., and M. Newton. 1961. “The Transport of Carbon Particles in the Human Female Reproductive Tract.” *Fertility and Sterility* 12 (April): 151–55.

“Exhibit 28, Deposition of John Hopkins, Ph.D., In Re: Talcum Powder Prod. Liab. Litig., MDL No. 2378.” 2018.

“Exhibit 47, Deposition of Julie Pier, In Re: Talcum Powder Prod. Liab. Litig., MDL 2738.” 2018.

Fathalla, M. F. 1971. “Incessant Ovulation--a Factor in Ovarian Neoplasia?” *Lancet* 2 (7716): 163.

———. 2013. “Incessant Ovulation and Ovarian Cancer - a Hypothesis Re-Visited.” *Facts, Views & Vision in ObGyn* 5 (4): 292–97.

Fedak, Kristen M., Autumn Bernal, Zachary A. Capshaw, and Sherilyn Gross. 2015. “Applying the Bradford Hill Criteria in the 21st Century: How Data Integration Has Changed Causal Inference in Molecular Epidemiology.” *Emerging Themes in Epidemiology* 12 (14). <https://doi.org/10.1186/s12982-015-0037-4>.

Ferguson, Lynnette R. 2010. “Chronic Inflammation and Mutagenesis.” *Mutation Research* 690 (1–2): 3–11. <https://doi.org/10.1016/j.mrfmmm.2010.03.007>.

Fletcher, Nicole, Memaj, Ira, and Saed, Ghassan. 2018. “Talcum Powder Enhances Oxidative Stress in Ovarian Cancer Cells.” *Reproductive Sciences*, February. <https://doi.org/10.1177/1933719118759999>.

Folkins, Ann K., Elke A. Jarboe, Jonathan L. Hecht, Michael G. Muto, and Christopher P. Crum. 2018. “Chapter 24 - Assessing Pelvic Epithelial Cancer Risk and Intercepting Early Malignancy.” In *Diagnostic Gynecologic and Obstetric Pathology (Third Edition)*, 844–64. Philadelphia: Content Repository Only! <https://doi.org/10.1016/B978-0-323-44732-4.00024-8>.

Ford, D., D.F. Easton, M. Stratton, S. Narod, D. Goldgar, P. Devilee, D.T. Bishop, et al. 1998. “Genetic Heterogeneity and Penetrance Analysis of the BRCA1 and BRCA2 Genes in Breast Cancer Families.” *The American Journal of Human Genetics* 62 (3): 676–89. <https://doi.org/10.1086/301749>.

Friebel, Tara M., Susan M. Domchek, and Timothy R. Rebbeck. 2014. “Modifiers of Cancer Risk in BRCA1 and BRCA2 Mutation Carriers: Systematic Review and Meta-Analysis.”

*Journal of the National Cancer Institute* 106 (6): dju091.  
<https://doi.org/10.1093/jnci/dju091>.

Gates, Margaret A., Shelley S. Tworoger, Kathryn L. Terry, Linda Titus-Ernstoff, Bernard Rosner, Immaculata De Vivo, Daniel W. Cramer, and Susan E. Hankinson. 2008. "Talc Use, Variants of the GSTM1, GSTT1, and NAT2 Genes, and Risk of Epithelial Ovarian Cancer." *Cancer Epidemiology, Biomarkers & Prevention : A Publication of the American Association for Cancer Research, Cosponsored by the American Society of Preventive Oncology* 17 (9): 2436–44. <https://doi.org/10.1158/1055-9965.EPI-08-0399>.

Germani, D., S. Belli, C. Bruno, M. Grignoli, M. Nesti, R. Pirastu, and P. Comba. 1999. "Cohort Mortality Study of Women Compensated for Asbestosis in Italy." *American Journal of Industrial Medicine* 36 (1): 129–34.

Gertig, D. M., D. J. Hunter, D. W. Cramer, G. A. Colditz, F. E. Speizer, W. C. Willett, and S. E. Hankinson. 2000. "Prospective Study of Talc Use and Ovarian Cancer." *Journal of the National Cancer Institute* 92 (3): 249–52.

Godard, B., W. D. Foulkes, D. Provencher, J. S. Brunet, P. N. Tonin, A. M. Mes-Masson, S. A. Narod, and P. Ghadirian. 1998. "Risk Factors for Familial and Sporadic Ovarian Cancer among French Canadians: A Case-Control Study." *American Journal of Obstetrics and Gynecology* 179 (2): 403–10.

Gonzalez, Kelly D., Katie A. Noltner, Carolyn H. Buzin, Dongqing Gu, Cindy Y. Wen-Fong, Vu Q. Nguyen, Jennifer H. Han, et al. 2009. "Beyond Li Fraumeni Syndrome: Clinical Characteristics of Families with P53 Germline Mutations." *Journal of Clinical Oncology: Official Journal of the American Society of Clinical Oncology* 27 (8): 1250–56.  
<https://doi.org/10.1200/JCO.2008.16.6959>.

Gonzalez, Nicole L., Katie M. O'Brien, Aimee A. D'Aloisio, Dale P. Sandler, and Clarice R. Weinberg. 2016. "Douching, Talc Use, and Risk of Ovarian Cancer." *Epidemiology (Cambridge, Mass.)* 27 (6): 797–802. <https://doi.org/10.1097/EDE.0000000000000528>.

Gross, A. J., and P. H. Berg. 1995. "A Meta-Analytical Approach Examining the Potential Relationship between Talc Exposure and Ovarian Cancer." *Journal of Exposure Analysis and Environmental Epidemiology* 5 (2): 181–95.

Hall, J. M., M. K. Lee, B. Newman, J. E. Morrow, L. A. Anderson, B. Huey, and M. C. King. 1990. "Linkage of Early-Onset Familial Breast Cancer to Chromosome 17q21." *Science (New York, N.Y.)* 250 (4988): 1684–89.

Hannenhalli, Sridhar, and Klaus H. Kaestner. 2009. "The Evolution of Fox Genes and Their Role in Development and Disease." *Nature Reviews. Genetics* 10 (4): 233–40.  
<https://doi.org/10.1038/nrg2523>.

Harlow, B. L., D. W. Cramer, D. A. Bell, and W. R. Welch. 1992. "Perineal Exposure to Talc and Ovarian Cancer Risk." *Obstetrics and Gynecology* 80 (1): 19–26.

Harlow, B. L., and N. S. Weiss. 1989. "A Case-Control Study of Borderline Ovarian Tumors: The Influence of Perineal Exposure to Talc." *American Journal of Epidemiology* 130 (2): 390–94.

Harper, Amy K, and Ghassan Saed. 2019. ""Talc Induces a pro-Oxidant State in Normal and Ovarian Cancer Cells through Genetic Point Mutations in Key Redox Enzymes," Accepted for Presentation at SGO Meeting."

Hartge, P., R. Hoover, L. P. Lesher, and L. McGowan. 1983. "Talc and Ovarian Cancer." *JAMA: The Journal of the American Medical Association* 250 (14): 1844.

Havrilesky, Laura J., Patricia G. Moorman, William J. Lowery, Jennifer M. Gierisch, Remy R. Coeytaux, Rachel Peragallo Urrutia, Michaela Dinan, et al. 2013. "Oral Contraceptive Pills as Primary Prevention for Ovarian Cancer: A Systematic Review and Meta-Analysis." *Obstetrics and Gynecology* 122 (1): 139–47. <https://doi.org/10.1097/AOG.0b013e318291c235>.

Henderson, W. J., C. A. Joslin, A. C. Turnbull, and K. Griffiths. 1971. "Talc and Carcinoma of the Ovary and Cervix." *The Journal of Obstetrics and Gynaecology of the British Commonwealth* 78 (3): 266–72.

Hill, Austin Bradford. 1965. "The Environment and Disease: Association or Causation?" *Proceedings of the Royal Society of Medicine* 58 (5): 295–300.

Horowitz, Neil S., Austin Miller, Bunja Rungruang, Scott D. Richard, Noah Rodriguez, Michael A. Bookman, Chad A. Hamilton, Thomas C. Krivak, and G. Larry Maxwell. 2015. "Does Aggressive Surgery Improve Outcomes? Interaction between Preoperative Disease Burden and Complex Surgery in Patients with Advanced-Stage Ovarian Cancer: An Analysis of GOG 182." *Journal of Clinical Oncology: Official Journal of the American Society of Clinical Oncology* 33 (8): 937–43. <https://doi.org/10.1200/JCO.2014.56.3106>.

Houghton, Serena C., Katherine W. Reeves, Susan E. Hankinson, Lori Crawford, Dorothy Lane, Jean Wactawski-Wende, Cynthia A. Thomson, Judith K. Ockene, and Susan R. Sturgeon. 2014. "Perineal Powder Use and Risk of Ovarian Cancer." *Journal of the National Cancer Institute* 106 (9). <https://doi.org/10.1093/jnci/dju208>.

Hunn, Jessica, and Gustavo C. Rodriguez. 2012. "Ovarian Cancer: Etiology, Risk Factors, and Epidemiology." *Clinical Obstetrics and Gynecology* 55 (1): 3–23. <https://doi.org/10.1097/GRF.0b013e31824b4611>.

IARC. 2012. "IARC Monographs on the Evaluation of Carcinogenic Risks to Humans: Volume 100C."

Khan, Mohd Imran, Amogh A. Sahasrabuddhe, Govil Patil, Mohd Javed Akhtar, Mohd Ashquin, and Iqbal Ahmad. 2011. "Nano-Talc Stabilizes TNF-Alpha m-RNA in Human Macrophages." *Journal of Biomedical Nanotechnology* 7 (1): 112–13.

Klampfer, Lidiya. 2011. "Cytokines, Inflammation and Colon Cancer." *Current Cancer Drug Targets* 11 (4): 451–64.

Knudson, A. G. 1971. "Mutation and Cancer: Statistical Study of Retinoblastoma." *Proceedings of the National Academy of Sciences of the United States of America* 68 (4): 820–23.

La Vecchia, Carlo. 2017. "Ovarian Cancer: Epidemiology and Risk Factors." *European Journal of Cancer Prevention* 26 (1): 55–62. <https://doi.org/10.1097/CEJ.0000000000000217>.

Langseth, H., S. E. Hankinson, J. Siemiatycki, and E. Weiderpass. 2008. "Perineal Use of Talc and Risk of Ovarian Cancer." *Journal of Epidemiology and Community Health* 62 (4): 358–60. <https://doi.org/10.1136/jech.2006.047894>.

Levanon, Keren, Christopher Crum, and Ronny Drapkin. 2008. "New Insights Into the Pathogenesis of Serous Ovarian Cancer and Its Clinical Impact." *Journal of Clinical Oncology* 26 (32): 5284–93. <https://doi.org/10.1200/JCO.2008.18.1107>.

Liou, Geou-Yagh, and Peter Storz. 2010. "Reactive Oxygen Species in Cancer." *Free Radical Research* 44 (5): 476–96. <https://doi.org/10.3109/10715761003667554>.

Lockey, J. E. 1981. "Nonasbestos Fibrous Minerals." *Clinics in Chest Medicine* 2 (2): 203–18.

Longo, D. L., and R. C. Young. 1979. "Cosmetic Talc and Ovarian Cancer." *Lancet* 2 (8138): 349–51.

Longo, William E., and Mark W. Rigler. 2018. "The Analysis of Johnson & Johnson's Historical Baby Powder & Shower to Shower Products from the 1960's to the Early 1990's for Amphibole Asbestos."

Magnani, C., D. Ferrante, F. Barone-Adesi, M. Bertolotti, A. Todesco, D. Mirabelli, and B. Terracini. 2008. "Cancer Risk after Cessation of Asbestos Exposure: A Cohort Study of Italian Asbestos Cement Workers." *Occupational and Environmental Medicine* 65 (3): 164–70. <https://doi.org/10.1136/oem.2007.032847>.

Mallen, Adrianne R., Mary K. Townsend, and Shelley S. Tworoger. 2018. "Risk Factors for Ovarian Carcinoma." *Hematology/Oncology Clinics of North America*, September. <https://doi.org/10.1016/j.hoc.2018.07.002>.

Murphy, Megan A., Britton Trabert, Hannah P. Yang, Yikyung Park, Louise A. Brinton, Patricia Hartge, Mark E. Sherman, Albert Hollenbeck, and Nicolas Wentzensen. 2012. "Non-Steroidal Anti-Inflammatory Drug Use and Ovarian Cancer Risk: Findings from the NIH-AARP Diet and Health Study and Systematic Review." *Cancer Causes & Control : CCC* 23 (11): 1839–52. <https://doi.org/10.1007/s10552-012-0063-2>.

Narod, Steven A. 2016. "Talc and Ovarian Cancer." *Gynecologic Oncology* 141 (3): 410–12. <https://doi.org/10.1016/j.ygyno.2016.04.011>.

Ness, R. B., J. A. Grisso, C. Cottreau, J. Klapper, R. Vergona, J. E. Wheeler, M. Morgan, and J. J. Schlesselman. 2000. "Factors Related to Inflammation of the Ovarian Epithelium and Risk of Ovarian Cancer." *Epidemiology (Cambridge, Mass.)* 11 (2): 111–17.

Nick, Alpa M., Robert L. Coleman, Pedro T. Ramirez, and Anil K. Sood. 2015. "A Framework for a Personalized Surgical Approach to Ovarian Cancer." *Nature Reviews. Clinical Oncology* 12 (4): 239–45. <https://doi.org/10.1038/nrclinonc.2015.26>.

Norquist, Barbara M., Maria I. Harrell, Mark F. Brady, Tom Walsh, Ming K. Lee, Suleyman Gulsuner, Sarah S. Bernards, et al. 2016. "Inherited Mutations in Women With Ovarian Carcinoma." *JAMA Oncology* 2 (4): 482–90. <https://doi.org/10.1001/jamaoncol.2015.5495>.

Okada, Futoshi. 2007. "Beyond Foreign-Body-Induced Carcinogenesis: Impact of Reactive Oxygen Species Derived from Inflammatory Cells in Tumorigenic Conversion and Tumor Progression." *International Journal of Cancer* 121 (11): 2364–72. <https://doi.org/10.1002/ijc.23125>.

Paoletti, L., S. Caiazza, G. Donelli, and F. Pocchiari. 1984. "Evaluation by Electron Microscopy Techniques of Asbestos Contamination in Industrial, Cosmetic, and Pharmaceutical Talcs." *Regulatory Toxicology and Pharmacology: RTP* 4 (3): 222–35.

Park, Hyo K., Joellen M. Schildkraut, Anthony J. Alberg, Elisa V. Bandera, Jill S. Barnholtz-Sloan, Melissa Bondy, Sydnee Crankshaw, et al. 2018. "Benign Gynecologic Conditions Are Associated with Ovarian Cancer Risk in African-American Women: A Case–Control Study." *Cancer Causes & Control*, September. <https://doi.org/10.1007/s10552-018-1082-4>.

Parmar, M. K. B., J. A. Ledermann, N. Colombo, A. du Bois, J.-F. Delaloye, G. B. Kristensen, S. Wheeler, et al. 2003. "Paclitaxel plus Platinum-Based Chemotherapy versus Conventional Platinum-Based Chemotherapy in Women with Relapsed Ovarian Cancer: The ICON4/AGO-OVAR-2.2 Trial." *Lancet (London, England)* 361 (9375): 2099–2106.

Penninkilampi, Ross, and Guy D. Eslick. 2018. "Perineal Talc Use and Ovarian Cancer: A Systematic Review and Meta-Analysis." *Epidemiology (Cambridge, Mass.)* 29 (1): 41–49. <https://doi.org/10.1097/EDE.0000000000000745>.

Purdie, D., A. Green, C. Bain, V. Siskind, B. Ward, N. Hacker, M. Quinn, G. Wright, P. Russell, and B. Susil. 1995. "Reproductive and Other Factors and Risk of Epithelial Ovarian Cancer: An Australian Case-Control Study. Survey of Women's Health Study Group." *International Journal of Cancer. Journal International Du Cancer* 62 (6): 678–84.

Ramus, Susan J., Antonis C. Antoniou, Karoline B. Kuchenbaecker, Penny Soucy, Jonathan Beesley, Xiaoqing Chen, Lesley McGuffog, et al. 2012. "Ovarian Cancer Susceptibility Alleles and Risk of Ovarian Cancer in BRCA1 and BRCA2 Mutation Carriers." *Human Mutation* 33 (4): 690–702. <https://doi.org/10.1002/humu.22025>.

Rasool, Nabil, Amanda Nickles Fader, Leigh Seamon, Nikki L. Neubauer, Fadi Abu Shahin, Heather A. Alexander, Kathleen Moore, et al. 2010. "Stage I, Grade 3 Endometrioid Adenocarcinoma of the Endometrium: An Analysis of Clinical Outcomes and Patterns of Recurrence." *Gynecologic Oncology* 116 (1): 10–14. <https://doi.org/10.1016/j.ygyno.2009.10.043>.

Rebeck, Timothy R., Nandita Mitra, Fei Wan, Olga M. Sinilnikova, Sue Healey, Lesley McGuffog, Sylvie Mazoyer, et al. 2015. "Association of Type and Location of BRCA1 and BRCA2 Mutations with Risk of Breast and Ovarian Cancer." *JAMA* 313 (13): 1347–61. <https://doi.org/10.1001/jama.2014.5985>.

Reid, A., N. H. de Klerk, C. Magnani, D. Ferrante, G. Berry, A. W. Musk, and E. Merler. 2014. "Mesothelioma Risk after 40 Years since First Exposure to Asbestos: A Pooled Analysis." *Thorax* 69 (9): 843–50. <https://doi.org/10.1136/thoraxjnl-2013-204161>.

Reid, Alison, Nick de Klerk, and Arthur W. (Bill) Musk. 2011. "Does Exposure to Asbestos Cause Ovarian Cancer? A Systematic Literature Review and Meta-Analysis." *Cancer Epidemiology Biomarkers & Prevention* 20 (7): 1287–95. <https://doi.org/10.1158/1055-9965.EPI-10-1302>.

Rohl, A. N., A. M. Langer, I. J. Selikoff, A. Tordini, R. Klimentidis, D. R. Bowes, and D. L. Skinner. 1976. "Consumer Talcums and Powders: Mineral and Chemical Characterization." *Journal of Toxicology and Environmental Health* 2 (2): 255–84. <https://doi.org/10.1080/15287397609529432>.

Rosenblatt, K. A., M. Szklo, and N. B. Rosenshein. 1992. "Mineral Fiber Exposure and the Development of Ovarian Cancer." *Gynecologic Oncology* 45 (1): 20–25.

Saed, Ghassan M., Michael P. Diamond, and Nicole M. Fletcher. 2017. "Updates of the Role of Oxidative Stress in the Pathogenesis of Ovarian Cancer." *Gynecologic Oncology* 145 (3): 595–602. <https://doi.org/10.1016/j.ygyno.2017.02.033>.

Saed, Ghassan M., Nicole M. Fletcher, Michael P. Diamond, Robert T. Morris, Nardhy Gomez-Lopez, and Ira Memaj. 2018. "Novel Expression of CD11b in Epithelial Ovarian Cancer: Potential Therapeutic Target." *Gynecologic Oncology* 148 (3): 567–75. <https://doi.org/10.1016/j.ygyno.2017.12.018>.

Saed, Ghassan M., Robert T. Morris, and Nicole M. Fletcher. 2018. *New Insights into the Pathogenesis of Ovarian Cancer: Oxidative Stress*.

Schildkraut, Joellen M., Sarah E. Abbott, Anthony J. Alberg, Elisa V. Bandera, Jill S. Barnholtz-Sloan, Melissa L. Bondy, Michele L. Cote, et al. 2016. "Association between Body Powder Use and Ovarian Cancer: The African American Cancer Epidemiology Study (AACES)." *Cancer Epidemiology, Biomarkers & Prevention: A Publication of the American Association for Cancer Research, Cosponsored by the American Society of Preventive Oncology* 25 (10): 1411–17. <https://doi.org/10.1158/1055-9965.EPI-15-1281>.

Shan, Weiwei, and Jinsong Liu. 2009. "Inflammation: A Hidden Path to Breaking the Spell of Ovarian Cancer." *Cell Cycle* 8 (19): 3107–11. <https://doi.org/10.4161/cc.8.19.9590>.

Shukla, Arti, Maximilian B. MacPherson, Jedd Hillegass, Maria E. Ramos-Nino, Vlada Alexeeva, Pamela M. Vacek, Jeffrey P. Bond, Harvey I. Pass, Chad Steele, and Brooke T. Mossman. 2009. "Alterations in Gene Expression in Human Mesothelial Cells Correlate with Mineral Pathogenicity." *American Journal of Respiratory Cell and Molecular Biology* 41 (1): 114–23. <https://doi.org/10.1165/rcmb.2008-0146OC>.

Sjösten, A. C. E., H. Ellis, and G. a. B. Edelstam. 2004. "Retrograde Migration of Glove Powder in the Human Female Genital Tract." *Human Reproduction* 19 (4): 991–95. <https://doi.org/10.1093/humrep/deh156>.

Terry, Kathryn L., Stalo Karageorgi, Yurii B. Shvetsov, Melissa A. Merritt, Galina Lurie, Pamela J. Thompson, Michael E. Carney, et al. 2013. "Genital Powder Use and Risk of Ovarian Cancer: A Pooled Analysis of 8,525 Cases and 9,859 Controls." *Cancer Prevention Research (Philadelphia, Pa.)* 6 (8): 811–21. <https://doi.org/10.1158/1940-6207.CAPR-13-0037>.

Tewari, Devansu, James J. Java, Ritu Salani, Deborah K. Armstrong, Maurie Markman, Thomas Herzog, Bradley J. Monk, and John K. Chan. 2015. "Long-Term Survival Advantage and Prognostic Factors Associated with Intraperitoneal Chemotherapy Treatment in Advanced Ovarian Cancer: A Gynecologic Oncology Group Study." *Journal of Clinical Oncology: Official Journal of the American Society of Clinical Oncology* 33 (13): 1460–66. <https://doi.org/10.1200/JCO.2014.55.9898>.

Thai, T. H., F. Du, J. T. Tsan, Y. Jin, A. Phung, M. A. Spillman, H. F. Massa, et al. 1998. "Mutations in the BRCA1-Associated RING Domain (BARD1) Gene in Primary Breast, Ovarian and Uterine Cancers." *Human Molecular Genetics* 7 (2): 195–202.

Trabert, Britton, Roberta B. Ness, Wei-Hsuan Lo-Ciganic, Megan A. Murphy, Ellen L. Goode, Elizabeth M. Poole, Louise A. Brinton, et al. 2014. "Aspirin, Nonaspirin Nonsteroidal Anti-Inflammatory Drug, and Acetaminophen Use and Risk of Invasive Epithelial Ovarian Cancer: A Pooled Analysis in the Ovarian Cancer Association Consortium." *JNCI Journal of the National Cancer Institute* 106 (2). <https://doi.org/10.1093/jnci/djt431>.

Trabert, Britton, Elizabeth M. Poole, Emily White, Kala Visvanathan, Hans-Olov Adami, Garnet L. Anderson, Theodore M. Brasky, et al. 2019. "Analgesic Use and Ovarian Cancer Risk: An Analysis in the Ovarian Cancer Cohort Consortium." *Journal of the National Cancer Institute* 111 (2). <https://doi.org/10.1093/jnci/djy100>.

Tzonou, A., A. Polychronopoulou, C. C. Hsieh, A. Rebelakos, A. Karakatsani, and D. Trichopoulos. 1993. "Hair Dyes, Analgesics, Tranquilizers and Perineal Talc Application as Risk Factors for Ovarian Cancer." *International Journal of Cancer. Journal International Du Cancer* 55 (3): 408–10.

Vasey, Paul A., Gordon C. Jayson, Alan Gordon, Hani Gabra, Rob Coleman, Ronnie Atkinson, David Parkin, et al. 2004. "Phase III Randomized Trial of Docetaxel-Carboplatin versus Paclitaxel-Carboplatin as First-Line Chemotherapy for Ovarian Carcinoma." *Journal of the National Cancer Institute* 96 (22): 1682–91. <https://doi.org/10.1093/jnci/djh323>.

Vitonis, Allison F., Linda Titus-Ernstoff, and Daniel W. Cramer. 2011. "Assessing Ovarian Cancer Risk When Considering Elective Oophorectomy at the Time of Hysterectomy." *Obstetrics and Gynecology* 117 (5): 1042–50. <https://doi.org/10.1097/AOG.0b013e318212fcb7>.

Watson, Ian R., Koichi Takahashi, P. Andrew Futreal, and Lynda Chin. 2013. "Emerging Patterns of Somatic Mutations in Cancer." *Nature Reviews. Genetics* 14 (10): 703–18. <https://doi.org/10.1038/nrg3539>.

Wentzensen, Nicolas, Elizabeth M. Poole, Britton Trabert, Emily White, Alan A. Arslan, Alpa V. Patel, V. Wendy Setiawan, et al. 2016. "Ovarian Cancer Risk Factors by Histologic Subtype: An Analysis From the Ovarian Cancer Cohort Consortium." *Journal of Clinical Oncology: Official Journal of the American Society of Clinical Oncology* 34 (24): 2888–98. <https://doi.org/10.1200/JCO.2016.66.8178>.

Werner, I. 1982. "Presence of Asbestos in Talc Samples." *Atemschutzinform* 21 (5).

Whittemore, A. S., M. L. Wu, R. S. Paffenbarger, D. L. Sarles, J. B. Kampert, S. Grosser, D. L. Jung, S. Ballon, and M. Hendrickson. 1988. "Personal and Environmental Characteristics Related to Epithelial Ovarian Cancer. II. Exposures to Talcum Powder, Tobacco, Alcohol, and Coffee." *American Journal of Epidemiology* 128 (6): 1228–40.

Whysner, J., and M. Mohan. 2000. "Perineal Application of Talc and Cornstarch Powders: Evaluation of Ovarian Cancer Risk." *American Journal of Obstetrics and Gynecology* 182 (3): 720–24.

Wignall, B.K., and A.J. Fox. 1982. "Mortality of Female Gas Mask Assemblers." *British Journal of Industrial Medicine* 39 (1): 34–38.

Wong, C. 1999. "Perineal Talc Exposure and Subsequent Epithelial Ovarian Cancer: A Case-Control Study." *Obstetrics & Gynecology* 93 (3): 372–76. [https://doi.org/10.1016/S0029-7844\(98\)00439-6](https://doi.org/10.1016/S0029-7844(98)00439-6).

Woodruff, J. D. 1979. "The Pathogenesis of Ovarian Neoplasia." *The Johns Hopkins Medical Journal* 144 (4): 117–20.

Wu, Anna H., Celeste L. Pearce, Chiu-Chen Tseng, Claire Templeman, and Malcolm C. Pike. 2009. "Markers of Inflammation and Risk of Ovarian Cancer in Los Angeles County." *International Journal of Cancer. Journal International Du Cancer* 124 (6): 1409–15. <https://doi.org/10.1002/ijc.24091>.

Wu, Song, Wei Zhu, Patricia Thompson, and Yusuf A. Hannun. 2018. "Evaluating Intrinsic and Non-Intrinsic Cancer Risk Factors." *Nature Communications* 9 (1): 3490. <https://doi.org/10.1038/s41467-018-05467-z>.

Yan, Bin, Yuanlin Peng, and Chuan-Yuan Li. 2009. "Molecular Analysis of Genetic Instability Caused by Chronic Inflammation." *Methods in Molecular Biology (Clifton, N.J.)* 512: 15–28. [https://doi.org/10.1007/978-1-60327-530-9\\_2](https://doi.org/10.1007/978-1-60327-530-9_2).

Yan, Bin, Huili Wang, Zahid Rabbani, Yulin Zhao, Wenrong Li, Yuqing Yuan, Fang Li, Mark W. Dewhirst, and Chuan-Yuan Li. 2006. "Tumor Necrosis Factor- $\alpha$  Is a Potent Endogenous Mutagen That Promotes Cellular Transformation." *Cancer Research* 66 (December): 11565.

# Exhibit A

## CURRICULUM VITAE

Ellen Blair Smith, M.D.

## PERSONAL DATA:

Birth Date: December 9, 1951

Mailing Address: 2311 Camino Alto Road  
Austin, Texas, USA 78746

Email: [ellenblairsmith@gmail.com](mailto:ellenblairsmith@gmail.com)

NPI: 15583054

Employment Status: Retired from Texas Oncology, PA December 31, 2015  
Medical director, Halcyon Home Hospice, April, 2017-present

## EDUCATIONAL HISTORY:

1969: Diploma, Grimsley High School, Greensboro, North Carolina  
1971: A.A. , St. Mary's Junior College, Raleigh, North Carolina  
1973: B.A. Biology, University of North Carolina, Greensboro. North Carolina  
1977: M.D., University of North Carolina. Chapel Hill, North Carolina

## SCHOLASTIC HONORS:

1974 Mosby Award  
1976 Merck Award  
1976 Student Aptitude Award, North Carolina Society of Obstetrics and Gynecology  
1976 Alpha Omega Alpha, University of North Carolina School of Medicine  
1977 American Medical Women's Association Citation of Scholastic Achievement

## POSTGRADUATE TRAINING:

1977-1978: Internship, Obstetrics and Gynecology, UTHSCSA, San Antonio, Texas  
1978-1981: Residency, Obstetrics and Gynecology, UTHSCSA, San Antonio, Texas  
1979: Galloway Fellowship, Memorial Sloan-Kettering, NY, NY  
1981-1984: Fellowship, Gynecologic Oncology, Duke University Medical School, Durham, NC (1983: American Cancer Society Fellow)

## PREVIOUS EMPLOYMENT:

1984-1987: Assistant Professor, Gynecologic Oncology, University of Virginia Medical School, Charlottesville, Virginia  
1987-1989: Physician and Sole Proprietor, Gynecologic Oncology, Austin, Texas  
1989-1995: Physician and President, Austin Gynecologic Oncology Associates, Austin, TX

## CURRICULUM VITAE

Ellen Blair Smith, M.D.

1995-2008: Physician and Partner, Southwest Regional Cancer Center, Austin, Texas  
2008-2015: Physician Shareholder, Texas Oncology, Austin, Texas

## MEDICAL LICENSURE:

Texas Medical Board: F0313 (active)  
DEA: AS 1121021 (active)  
Texas DPS 40063099 (active)  
North Carolina State: 24537 (inactive)  
Virginia State: 10103669 (inactive)

## BOARD CERTIFICATIONS:

1985 American Board of Obstetrics and Gynecology (lifetime certified, voluntary  
recertification 1996)  
1987 American Board of Obstetrics and Gynecology, Division of Gynecologic Oncology  
(lifetime certified, voluntary recertification 1996)  
2011 Hospice and Palliative Medicine (via ABOG), expires 2021

## APPOINTMENTS:

1981-1982 Associate, Obstetrics and Gynecology, Duke University Medical School,  
Durham, NC  
1982-1984 Assistant Professor, Obstetrics and Gynecology, Duke University Medical  
School, Durham, NC  
1984-1987 Assistant Professor, Department of Obstetric and Gynecology, University  
of Virginia Medical Center, Charlottesville, VA  
1997-2000 Renaissance Women's Center Advisory Board, Austin, Texas  
1998-2003 Hospice Austin Medical Advisory Board, Austin, Texas  
1999-2001 Mediation Committee, Travis County Medical Society, Austin, Texas  
2001-2007 Gynecologic Cancer Foundation, Board of Directors  
Nominating Committee Chair 2004  
2007-2008 Section Chief Ob-Gyn, Seton Medical Center, Austin, Texas  
2007-2014 Member Surgical Committee, Seton Medical Center, Austin, Texas  
2011-2013 Medical Director of Surgical Services, US Oncology (elected office)  
2011-2013 Member, National Policy Board Executive Committee, US Oncology  
2011-2015 Member, Managed Care Committee, US Oncology  
2011-2015 Member, Pathways Committee, US Oncology

## PROFESSIONAL SOCIETIES:

Alpha Omega Alpha (1976-current)  
American Cancer Society  
1985-1987 Charlottesville-Albemarle Unit  
Board of Directors  
Executive Committee  
  
1984-1986 Virginia Unit

## CURRICULUM VITAE

Ellen Blair Smith, M.D.

Board of Directors  
Colorectal Cancer Control Project Steering Committee  
Finance Committee 1986  
Nominating Committee 1986  
1987-1988 Austin, Texas Unit  
Public Education Chairman  
American Congress of Obstetrics and Gynecology (1988-Life Member)  
Society of Gynecologic Oncology (1988-lifetime)  
Program Committee 1995-1996  
Coding Committee 1996-2001  
Nominating Committee 2008  
Palliative Care Committee 2009-current  
Session Moderator-Palliative Care- SGO Annual Meeting-2014  
Steering Committee, SGO Genetics Summit-2015  
American Academy of Hospice and Palliative Medicine 2010-present

## PUBLICATIONS (PEER-REVIEWED JOURNALS) :

**Smith, EB**, Weed, JC, Tyrey, L and Hamond, CB: "Treatment of Nonmetastatic GTD: Results of Methotrexate-Folinic Acid." *Amer J Obstet Gynecol*, 144:88, 1982.

**Smith, EB**, Szulman, AE, Hinshaw, W, Tyrey, Surti, U, and Hammond, CB: "Human Chorionic Gonadotropin Level in Complete and Partial Hydatidiform Moles and Nonmolar Abortuses." *Amer J Obstet Gynecol*, 149: 129, 1984.

**Smith, EB**, Clarke-Pearson, DL, and Creasman, WT: "A VP-16 and Cis-Platinum Containing Regimen for Treatment of Refractory Ovarian Germ Cell Malignancies" *Amer J Obstet Gynecol*, 150:927, 1984.

**Smith, EB**, Dunnick, R, Nelson, PA and Hammond, CB: "Renal Metastases of Malignant Gestational Trophoblastic Disease with Particular Attention to the Use of Intravenous Urography in Staging." *Gynecol Oncol* 20: 137, 1985.

Barter, J, **Smith, EB**, Szpak, CA, et al: "Leiomyosarcoma of the Uterus: A Clinicopathologic Study of 21 Patients." *Gynecol Oncol* 21:221, 1985.

Puleo, JG, Clarke-Pearson, DL, **Smith, EB**, Barnard, DE, and Creasman, WT: "Superior Vena Cava Syndrome Associated with Gynecologic Malignancy." *Gynecol Oncol* 23:59, 1986.

Taylor, PT, Anderson, WA, Barber, SR, Covell, JL, **Smith, EB**, and Underwood, PB: "The Screening Papanicolaou Smear: Contribution of the Endocervical Brush." *Obstet Gynecol* 70:734, 1987.

Anderson, WA, Found, D, Peters, W, **Smith, EB**, Bagley, C and Taylor, PT: "Platinum-Based Combination Chemotherapy for Malignant Mixed Mesodermal Tumors of the Ovary." *Gynecol Oncol* 32: 319, 1989.

Plante, M, **Smith, EB** et al: "The case of a viable pregnancy post vaginal radical trachelectomy followed by combined chemoradiation." *Gynecol Oncol* 123:421, 2011.

## CURRICULUM VITAE

Ellen Blair Smith, M.D.

## PUBLICATIONS (INVITED ARTICLES AND BOOK CHAPTERS):

Creasman, WT, **Smith, EB** and Clarke-Pearson, DL: "Gestational Trophoblastic Disease." *The Female Patient*, 9:66, 1984.

**Smith, EB**, Clarke-Pearson, DL, and Creasman, WT: "Screening of Cervical Cancer." (Chapter10) *Screening and Monitoring of Cancer*. Basil A Still, ed. John Wiley & Sons; 1985.

**Smith, EB** and Creasman, WT: "Preinvasive and Invasive Cervical Carcinoma Associated With Pregnancy." *Principles of Medical Therapy in Pregnancy*. N Gleicher, ed. Plenum Publishing Corp. New York, New York. 1985. Revision 1990.

**Smith, EB**, Hammond, CB, Gore, H and Hertig, A. "Gestational Trophoblastic Disease". *Management of the Patient with Cancer*. 3rd edition. TF Nealon, ed. W. B. Saunders CO, Philadelphia, Pa. 1986.

**Smith, EB**: "Gynecology for the Urologist." *Adult and Pediatric Urology*. J Gillenwater. ed. Year Book Medical Publishers; 1987. Revision 1991.

## INVITED LECTURES:

SGO State of the Art Meeting 2011- Palliative Care

SGO Winter Meeting 2013-Palliative Care

# Exhibit B

First author and year	Cases (%talc use)	Controls (%talc use)	OR	95% CI	Dose Response	Comments
Cramer, 1982	215 (43%)	215 (28%)	1.9	1.27-2.89		
Hartge,1983	135	171	0.7	0.4-1.1		hosp, letter only. Only 10 with perineal use
Whittemore, 1988	188 (52%)	539 (46%)	1.45	0.81-2.8	no	perineal use, mixed hosp and population
Harlow, 1989	116	158	2.8	1.111.7	no	LMP only, deodorant powder +/-talc
Booth,1989	235 (68%)	451 (61%)	rare=0.9 weekly=2.0 daily=1.3	0.3-2.4 1.3-3.4 0.8-1.9	no	hosp. path reviewed
Rosenblatt, 1992	77 (91%)	46	1	0.2-4.0		These numbers are way too small.
Chen,1992	112 (6%)	224 (2%)	3.9	0.9-11.6		also used occupational exposure, only 7 vs 5 total perineal powder users
Harlow, 1002	235 (48.5%)	239 (39.3)	1.5	1.0-21	trend NSS	perineal use
Tzounou,1993	189 (3%)	200 (3.5%)	1.05	0.28-3.98		hosp, hairdye, low usage numbers, Greece
Purdie,1995	824 (57%)	860 (52%)	1.25	1.04-1.54		adj for parity , 17% LMP Australia
Shusan, 1996	200 (11%)	406 (5.6%)	seems to be : simple X2= 0.4			Never/seldom vs mod-a lot, Focus on fertility drugs Israel
Chang, 1997	450 (44%)	564 (35.6%)	all 1.42 LMP 1.24 inv 1.51	1.08-1.86 0.76-2.02 1.13-2.02	duration=borderline frequency=no	no assn with cornstarch, Canada
Cook, 1997	313	422	1.5	1.1-2.0	no	ever powder use, looked at genital deodorant as well
Godard,1998	170 (10.6)	170 (4.7)	2.49	0.94-6.56		perineal use only p=0.066 French Canadians
Wong, 1999	499 (47.8%)	755 (44.9%)	genital+pad 1.1 genital 1.0 pad 0.9	0.7-1.7 0.8-1.3 0.4-2.0	no	

first author, year	cases (% talc use)	controls (%talc use)	OR	95% CI	dose-response	Comments
Cramer, 1999	563 (45%)	523 (36%)	any genital powder 1.6 perineal talc 1.69	1.18-2.15 1.26-2.27	no	
Ness,2000	767 (55%)	1367 (47%)	genital 1.5 pad 1.6	1.1-2.0 1.1-2.3	no	BTL protective, risk increased with talc on all areas body
Mills,2004	256 (43%)	1122 (37%)	ever talc 1.37 serous 1.77	1.02-1.85 1.12-1.81	no	
Merritt, 2008	1576 (46%)	1509 (43%)	1.17	1.01-1.36		adjusted OR, decreased with ASA, BIG NUMBERS
Moorman,2009	143 AA 943 white	189 AA 868 white	1.19 1.04	0.68-2.09 0.82-1.33)		Australia includes LMP, FT, PP
Rosenblatt, 2011	812	1313	all 1.27 LMP 1.55 inv 1.38	0.97-1.66 1.02-2.37 0.77-2.47	no	
Kurtha, 2012	902 (22%)	1802 (20.9%)	1.4	1.16-1.69		The definitive fertility drug risk paper
Wu, 2015	hispanics 308 (38%) AA 128 (48%) white 1265 (41%)	380 (28%) 143 (44%) 1868 (30%)	1.56 1.77 1.41	0.8-3.04 1.20-2.62 1.21-1.67		Stat sig more talc use in AAs
Cramer, 2016	2014 (51%)	2100 (48%)	1.33	1.16-1.52	trend for freq none for duration	
Schildkraut,2016	584 (63%)	745 (53%)	1.44	1.11-1.86	yes	

# Exhibit C

“A Survey of the Long-Term Effects of Talc and Kaolin Pleurodesis.” *British Journal of Diseases of the Chest* 73 (1979): 285–88. [https://doi.org/10.1016/0007-0971\(79\)90054-8](https://doi.org/10.1016/0007-0971(79)90054-8).

Acencio, Milena M. P., Evaldo Marchi, Lisete R. Teixeira, Bruna Rocha Silva, Juliana Sanchez Silva, Carlos Sergio Rocha Silva, Vanessa Adelia Alvarenga, Leila Antonangelo, Francisco Suso Vargas, and Vera Luiza Capelozzi. “Talc Particles and Pleural Mesothelium Interface Modulate Apoptosis and Inflammation.” *Pathology* 46, no. S2 (2014): S76.

Acheson, E D, M J Gardner, E C Pippard, and L P Grime. “Mortality of Two Groups of Women Who Manufactured Gas Masks from Chrysotile and Crocidolite Asbestos: A 40-Year Follow-Up.” *British Journal of Industrial Medicine* 39, no. 4 (November 1982): 344–48.

Akhtar, Mohd Javed, Maqusood Ahamed, M.A. Majeed Khan, Salman A. Alrokayan, Iqbal Ahmad, and Sudhir Kumar. “Cytotoxicity and Apoptosis Induction by Nanoscale Talc Particles from Two Different Geographical Regions in Human Lung Epithelial Cells.” *Environmental Toxicology* 29 (2014): 394–406. <https://doi.org/10.1002/tox.21766>.

Akhtar, Mohd Javed, Sudhir Kumar, Ramesh Chandra Murthy, Mohd Ashquin, Mohd Imran Khan, Govil Patil, and Iqbal Ahmad. “The Primary Role of Iron-Mediated Lipid Peroxidation in the Differential Cytotoxicity Caused by Two Varieties of Talc Nanoparticles on A549 Cells and Lipid Peroxidation Inhibitory Effect Exerted by Ascorbic Acid.” *Toxicology in Vitro: An International Journal Published in Association with BIBRA* 24, no. 4 (June 2010): 1139–47. <https://doi.org/10.1016/j.tiv.2010.03.002>.

American Cancer Society. “Key Statistics for Ovarian Cancer,” n.d. <https://www.cancer.org/cancer/ovarian-cancer/about/key-statistics.html>.

———. “What Is Ovarian Cancer?,” n.d. <https://www.cancer.org/cancer/ovarian-cancer/about/what-is-ovarian-cancer.html>.

Anderson, Garnet L., Howard L. Judd, Andrew M. Kaunitz, David H. Barad, Shirley A. A. Beresford, Mary Pettinger, James Liu, S. Gene McNeeley, Ana Maria Lopez, and Women’s Health Initiative Investigators. “Effects of Estrogen plus Progestin on Gynecologic Cancers and Associated Diagnostic Procedures: The Women’s Health Initiative Randomized Trial.” *JAMA* 290, no. 13 (October 1, 2003): 1739–48. <https://doi.org/10.1001/jama.290.13.1739>.

Antoniou, A., P. D. P. Pharoah, S. Narod, H. A. Risch, J. E. Eyfjord, J. L. Hopper, N. Loman, et al. “Average Risks of Breast and Ovarian Cancer Associated with BRCA1 or BRCA2 Mutations Detected in Case Series Unselected for Family History: A Combined Analysis of 22 Studies.” *American Journal of Human Genetics* 72, no. 5 (May 2003): 1117–30.

Arellano-Orden, Elena, Auxiliadora Romero-Falcon, Jose Martin Juan, Manuel Ocana Jurado, Francisco Rodriguez-Panadero, and Ana Montes-Worboys. “Small Particle-Size Talc Is Associated with Poor Outcome and Increased Inflammation in Thoracoscopic Pleurodesis.” *Respiration* 86 (2013): 201–9. <https://doi.org/10.1159/000342042>.

Armstrong, Deborah K., Brian Bundy, Lari Wenzel, Helen Q. Huang, Rebecca Baergen, Shashikant Lele, Larry J. Copeland, Joan L. Walker, Robert A. Burger, and Gynecologic Oncology Group. “Intraperitoneal Cisplatin and Paclitaxel in Ovarian Cancer.” *The New England Journal of Medicine* 354, no. 1 (January 5, 2006): 34–43. <https://doi.org/10.1056/NEJMoa052985>.

“ATSDR - Toxicological Profile: Asbestos.” Accessed August 16, 2018. <https://www.atsdr.cdc.gov/toxprofiles/tp.asp?id=30&tid=4>.

Baldwin, Lauren A., Bin Huang, Rachel W. Miller, Thomas Tucker, Scott T. Goodrich, Iwona Podzielinski, Christopher P. DeSimone, Fred R. Ueland, John R. van Nagell, and Leigh G. Seamon. “Ten-Year Relative Survival for Epithelial Ovarian Cancer.” *Obstetrics & Gynecology* 120, no. 3 (September 2012): 612–18. <https://doi.org/10.1097/AOG.0b013e318264f794>.

Balkwill, Fran, and Alberto Mantovani. "Inflammation and Cancer: Back to Virchow?" *The Lancet* 357, no. 9255 (February 2001): 539–45. [https://doi.org/10.1016/S0140-6736\(00\)04046-0](https://doi.org/10.1016/S0140-6736(00)04046-0).

Beck, B. D., H. A. Feldman, J. D. Brain, T. J. Smith, M. Hallock, and B. Gerson. "The Pulmonary Toxicity of Talc and Granite Dust as Estimated from an in Vivo Hamster Bioassay." *Toxicology and Applied Pharmacology* 87, no. 2 (February 1987): 222–34.

Begg, Melissa D., and Dana March. "Cause and Association: Missing the Forest for the Trees." *American Journal of Public Health* 108, no. 5 (May 2018): 620. <https://doi.org/10.2105/AJPH.2018.304366>.

Belotte, Jimmy, Nicole M. Fletcher, Awoniyi O. Awonuga, Mitchell Alexis, Husam M. Abu-Soud, Ghassan M. Saed, Michael P. Diamond, and Mohammed G. Saed. "The Role of Oxidative Stress in the Development of Cisplatin Resistance in Epithelial Ovarian Cancer." *Reproductive Sciences* 21, no. 4 (2014): 503–8. <https://doi.org/10.1177/1933719113503403>.

Belotte, Jimmy, Nicole M. Fletcher, Mohammed G. Saed, Mohammed S. Abusamaan, Gregory Dyson, Michael P. Diamond, and Ghassan M. Saed. "A Single Nucleotide Polymorphism in Catalase Is Strongly Associated with Ovarian Cancer Survival." *PloS One* 10, no. 8 (2015). <https://doi.org/e0135739>. doi:10.1371/journal.pone.0135739.

Berge, Wera, Kenneth Mundt, Hung Luu, and Paolo Boffetta. "Genital Use of Talc and Risk of Ovarian Cancer: A Meta-Analysis." *European Journal of Cancer Prevention*, January 2017, 1. <https://doi.org/10.1097/CEJ.0000000000000340>.

———. "Genital Use of Talc and Risk of Ovarian Cancer: A Meta-Analysis." *European Journal of Cancer Prevention: The Official Journal of the European Cancer Prevention Organisation (ECP)* 27, no. 3 (2018): 248–57. <https://doi.org/10.1097/CEJ.0000000000000340>.

Berry, G., M. L. Newhouse, and J. C. Wagner. "Mortality from All Cancers of Asbestos Factory Workers in East London 1933–80." *Occupational and Environmental Medicine* 57, no. 11 (November 2000): 782–85.

Bertolotti, Marinella, Daniela Ferrante, Dario Mirabelli, Mario Botta, Marinella Nonnato, Annalisa Todesco, Benedetto Terracini, and Corrado Magnani. "[Mortality in the cohort of the asbestos cement workers in the Eternit plant in Casale Monferrato (Italy)]." *Epidemiologia E Prevenzione* 32, no. 4–5 (October 2008): 218–28.

Blank, M M, N Wentzensen, M A Murphy, A Hollenbeck, and Y Park. "Dietary Fat Intake and Risk of Ovarian Cancer in the NIH-AARP Diet and Health Study." *British Journal of Cancer* 106, no. 3 (January 31, 2012): 596–602. <https://doi.org/10.1038/bjc.2011.572>.

Blount, A M. "Amphibole Content of Cosmetic and Pharmaceutical Talc." *Environmental Health Perspectives* 94 (August 1991): 225–30.

Bluemel, Piza, and Zischka-Konorsa, W. "Animal experimental investigations of tissue reactions to starch and talcum powder after intraperitoneal application." *Wiener klinische Wochenschrift* 74, no. 1 (January 1962).

Blumenkrantz, M. J., N. Gallagher, R. A. Bashore, and H. Tenckhoff. "Retrograde Menstruation in Women Undergoing Chronic Peritoneal Dialysis." *Obstetrics and Gynecology* 57, no. 5 (May 1981): 667–70.

Boorman, G. A., and J. C. Seely. "The Lack of an Ovarian Effect of Lifetime Talc Exposure in F344/N Rats and B6C3F1 Mice." *Regulatory Toxicology and Pharmacology: RTP* 21, no. 2 (April 1995): 242–43. <https://doi.org/10.1006/rtpb.1995.1035>.

Booth, M., V. Beral, and P. Smith. "Risk Factors for Ovarian Cancer: A Case-Control Study." *British Journal of Cancer* 60, no. 4 (October 1989): 592–98.

Bottazzi, Barbara, Elio Riboli, and Alberto Mantovani. "Aging, Inflammation and Cancer." *Seminars in Immunology*, November 5, 2018. <https://doi.org/10.1016/j.smim.2018.10.011>.

Bunderson-Schelvan, Melisa, Jean C. Pfau, Robert Crouch, and Andrij Holian. "Nonpulmonary Outcomes of Asbestos Exposure." *Journal of Toxicology and Environmental Health. Part B, Critical Reviews* 14, no. 1–4 (2011): 122–52. <https://doi.org/10.1080/10937404.2011.556048>.

Burn, John, Anne-Marie Gerdés, Finlay Macrae, Jukka-Pekka Mecklin, Gabriela Moeslein, Sylviane Olschwang, Diane Eccles, et al. "Long-Term Effect of Aspirin on Cancer Risk in Carriers of Hereditary Colorectal Cancer: An Analysis from the CAPP2 Randomised Controlled Trial." *Lancet (London, England)* 378, no. 9809 (December 17, 2011): 2081–87. [https://doi.org/10.1016/S0140-6736\(11\)61049-0](https://doi.org/10.1016/S0140-6736(11)61049-0).

Buz'Zard, Amber R., and Benjamin H. S. Lau. "Pycnogenol® Reduces Talc-Induced Neoplastic Transformation in Human Ovarian Cell Cultures." *Phytotherapy Research* 21, no. 6 (June 2007): 579–86. <https://doi.org/10.1002/ptr.2117>.

Caldwell, Carlyle G., White Thomas Aubrey, William L. George, and James J. Eberl. Medical dusting powder. United States US2626257A, filed May 21, 1952, and issued January 20, 1953. <https://patents.google.com/patent/US2626257A/en?q=medical&q=dusting+powder&oq=medical+dusting+powder>.

Camargo, M. Constanza, Leslie T. Stayner, Kurt Straif, Margarita Reina, Umaina Al-Alem, Paul A. Demers, and Philip J. Landrigan. "Occupational Exposure to Asbestos and Ovarian Cancer: A Meta-Analysis." *Environmental Health Perspectives* 119, no. 9 (September 2011): 1211–17. <https://doi.org/10.1289/ehp.1003283>.

Carr, C.J. "Talc: Consumer Uses and Health Perspectives" 21 (1995): 211–15.

Chan, Andrew T., Edward L. Giovannucci, Jeffrey A. Meyerhardt, Eva S. Schernhammer, Gary C. Curhan, and Charles S. Fuchs. "Long-Term Use of Aspirin and Nonsteroidal Anti-Inflammatory Drugs and Risk of Colorectal Cancer." *JAMA* 294, no. 8 (August 24, 2005): 914–23. <https://doi.org/10.1001/jama.294.8.914>.

Chang, Che-Jui, Yu-Kang Tu, Pau-Chung Chen, and Hsiao-Yu Yang. "Occupational Exposure to Talc Increases the Risk of Lung Cancer: A Meta-Analysis of Occupational Cohort Studies." *Canadian Respiratory Journal*, 2017. <https://doi.org/10.1155/2017/1270608>.

Chang, Stella, and Harvey A. Risch. "Perineal Talc Exposure and Risk of Ovarian Carcinoma." *Cancer* 79, no. 12 (June 15, 1997): 2396–2401. [https://doi.org/10.1002/\(SICI\)1097-0142\(19970615\)79:12<2396::AID-CNCR15>3.0.CO;2-M](https://doi.org/10.1002/(SICI)1097-0142(19970615)79:12<2396::AID-CNCR15>3.0.CO;2-M).

Chen, F., K. Gaitskell, M. J. Garcia, A. Albukhari, J. Tsaltas, and A. A. Ahmed. "Serous Tubal Intraepithelial Carcinomas Associated with High-Grade Serous Ovarian Carcinomas: A Systematic Review." *BJOG: An International Journal of Obstetrics and Gynaecology* 124, no. 6 (May 2017): 872–78. <https://doi.org/10.1111/1471-0528.14543>.

Chen, Lee-May, and Jonathan S Berek. "Overview of Epithelial Carcinoma of the Ovary, Fallopian Tube, and Peritoneum." *UpToDate*, 2018.

Chen, L-M, et al. "Epithelial Carcinoma of the Ovary, Fallopian Tube, and Peritoneum: Epidemiology and Risk Factors - UpToDate," 2018. [https://www.uptodate.com/contents/epithelial-carcinoma-of-the-ovary-fallopian-tube-and-peritoneum-epidemiology-and-risk-factors?search=Epithelial%20carcinoma%20of%20the%20ovary,%20fallopian%20tube,%20and%20peritoneum:%20Epidemiology%20and%20risk%20factors&source=search\\_result&selectedTitle=1~150&usage\\_type=default&display\\_rank=1](https://www.uptodate.com/contents/epithelial-carcinoma-of-the-ovary-fallopian-tube-and-peritoneum-epidemiology-and-risk-factors?search=Epithelial%20carcinoma%20of%20the%20ovary,%20fallopian%20tube,%20and%20peritoneum:%20Epidemiology%20and%20risk%20factors&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1).

Chen, Xi, Gerd A. Müller, Marianne Quaas, Martin Fischer, Namshik Han, Benjamin Stutchbury, Andrew D. Sharrocks, and Kurt Engeland. "The Forkhead Transcription Factor FOXM1

Controls Cell Cycle-Dependent Gene Expression through an Atypical Chromatin Binding Mechanism.” *Molecular and Cellular Biology* 33, no. 2 (January 2013): 227–36. <https://doi.org/10.1128/MCB.00881-12>.

Chen, Y., P. C. Wu, J. H. Lang, W. J. Ge, P. Hartge, and L. A. Brinton. “Risk Factors for Epithelial Ovarian Cancer in Beijing, China.” *International Journal of Epidemiology* 21, no. 1 (February 1992): 23–29.

Chien, Jeremy, Hugues Sicotte, Jian-Bing Fan, Sean Humphray, Julie M. Cunningham, Kimberly R. Kalli, Ann L. Oberg, et al. “TP53 Mutations, Tetraploidy and Homologous Recombination Repair Defects in Early Stage High-Grade Serous Ovarian Cancer.” *Nucleic Acids Research* 43, no. 14 (August 18, 2015): 6945–58. <https://doi.org/10.1093/nar/gkv111>.

Chittenden, B. G., G. Fullerton, A. Maheshwari, and S. Bhattacharya. “Polycystic Ovary Syndrome and the Risk of Gynaecological Cancer: A Systematic Review.” *Reproductive Biomedicine Online* 19, no. 3 (September 2009): 398–405.

Cibula, D., M. Widschwendter, O. Májek, and L. Dusek. “Tubal Ligation and the Risk of Ovarian Cancer: Review and Meta-Analysis.” *Human Reproduction Update* 17, no. 1 (January 1, 2011): 55–67. <https://doi.org/10.1093/humupd/dmq030>.

Cibula, David, Martin Widschwendter, Michael Zikan, and Ladislav Dusek. “Underlying Mechanisms of Ovarian Cancer Risk Reduction after Tubal Ligation.” *Acta Obstetricia Et Gynecologica Scandinavica* 90, no. 6 (June 2011): 559–63. <https://doi.org/10.1111/j.1600-0412.2011.01114.x>.

CIMBA, Georgia Chenevix-Trench, Roger L Milne, Antonis C Antoniou, Fergus J Couch, Douglas F Easton, and David E Goldgar. “An International Initiative to Identify Genetic Modifiers of Cancer Risk in BRCA1 and BRCA2 Mutation Carriers: The Consortium of Investigators of Modifiers of BRCA1 and BRCA2 (CIMBA).” *Breast Cancer Research* 9, no. 2 (December 2007). <https://doi.org/10.1186/bcr1670>.

Cohen, Samuel M., and Lora L. Arnold. “Chemical Carcinogenesis.” *Toxicological Sciences* 120, no. suppl\_1 (March 1, 2011): S76–92. <https://doi.org/10.1093/toxsci/kfq365>.

Colditz, Graham A. “Cancer Prevention.” *UpToDate*, 2018.

Collaborative Group on Epidemiological Studies of Ovarian Cancer, V. Beral, R. Doll, C. Hermon, R. Peto, and G. Reeves. “Ovarian Cancer and Oral Contraceptives: Collaborative Reanalysis of Data from 45 Epidemiological Studies Including 23,257 Women with Ovarian Cancer and 87,303 Controls.” *Lancet* 371, no. 9609 (January 26, 2008): 303–14. [https://doi.org/10.1016/S0140-6736\(08\)60167-1](https://doi.org/10.1016/S0140-6736(08)60167-1).

Collaborative Group On Epidemiological Studies Of Ovarian Cancer, V. Beral, K. Gaitskell, C. Hermon, K. Moser, G. Reeves, and R. Peto. “Menopausal Hormone Use and Ovarian Cancer Risk: Individual Participant Meta-Analysis of 52 Epidemiological Studies.” *Lancet (London, England)* 385, no. 9980 (May 9, 2015): 1835–42. [https://doi.org/10.1016/S0140-6736\(14\)61687-1](https://doi.org/10.1016/S0140-6736(14)61687-1).

Committee on Practice Bulletins–Gynecology, Committee on Genetics, Society of Gynecologic Oncology. “Practice Bulletin No 182: Hereditary Breast and Ovarian Cancer Syndrome.” *Obstetrics and Gynecology* 130, no. 3 (2017): e110–26. <https://doi.org/10.1097/AOG.0000000000002296>.

Compton, Sarah A., Sezgin Ozgür, and Jack D. Griffith. “Ring-Shaped Rad51 Paralog Protein Complexes Bind Holliday Junctions and Replication Forks as Visualized by Electron Microscopy.” *The Journal of Biological Chemistry* 285, no. 18 (April 30, 2010): 13349–56. <https://doi.org/10.1074/jbc.M109.074286>.

Cook, Linda S., Mary L. Kamb, and Noel S. Weiss. "Perineal Powder Exposure and the Risk of Ovarian Cancer." *American Journal of Epidemiology* 145, no. 5 (March 1, 1997): 459–65.

Cook, LS. "Erratum in 'Perineal Powder Exposure and the Risk of Ovarian Cancer'." *American Journal of Epidemiology* 148, no. 410 (1997).

Coussens, Lisa M., and Zena Werb. "Inflammation and Cancer." *Nature* 420, no. 6917 (December 19, 2002): 860–67. <https://doi.org/10.1038/nature01322>.

Crallay, L. J., M. M. Key, D. H. Groth, W. S. Lainhart, and R. M. Ligo. "Fibrous and Mineral Content of Cosmetic Talcum Products." *American Industrial Hygiene Association Journal* 29, no. 4 (August 1968): 350–54. <https://doi.org/10.1080/00028896809343015>.

Cramer, D. W. "Perineal Talc Exposure and Subsequent Epithelial Ovarian Cancer: A Case-Control Study." *Obstetrics and Gynecology* 94, no. 1 (July 1999): 160–61.

Cramer, D. W., R. F. Liberman, L. Titus-Ernstoff, W. R. Welch, E. R. Greenberg, J. A. Baron, and B. L. Harlow. "Genital Talc Exposure and Risk of Ovarian Cancer." *International Journal of Cancer. Journal International Du Cancer* 81, no. 3 (May 5, 1999): 351–56.

Cramer, D. W., W. R. Welch, R. E. Scully, and C. A. Wojciechowski. "Ovarian Cancer and Talc: A Case-Control Study." *Cancer* 50, no. 2 (July 15, 1982): 372–76.

Cramer, Daniel W., Linda Titus-Ernstoff, John R. McKolanis, William R. Welch, Allison F. Vitonis, Ross S. Berkowitz, and Olivera J. Finn. "Conditions Associated with Antibodies Against the Tumor-Associated Antigen MUC1 and Their Relationship to Risk for Ovarian Cancer." *Cancer Epidemiology Biomarkers & Prevention* 14, no. 5 (May 1, 2005): 1125–31. <https://doi.org/10.1158/1055-9965.EPI-05-0035>.

Cramer, Daniel W., Allison F. Vitonis, Kathryn L. Terry, William R. Welch, and Linda J. Titus. "The Association between Talc Use and Ovarian Cancer: A Retrospective Case-Control Study in Two US States." *Epidemiology (Cambridge, Mass.)*, December 17, 2015. <https://doi.org/10.1097/EDE.0000000000000434>.

———. "The Association Between Talc Use and Ovarian Cancer: A Retrospective Case-Control Study in Two US States." *Epidemiology (Cambridge, Mass.)* 27, no. 3 (May 2016): 334–46. <https://doi.org/10.1097/EDE.0000000000000434>.

Cramer, Daniel W., William R. Welch, Ross S. Berkowitz, and John J. Godleski. "Presence of Talc in Pelvic Lymph Nodes of a Woman with Ovarian Cancer and Long-Term Genital Exposure to Cosmetic Talc." *Obstetrics and Gynecology* 110, no. 2 Pt 2 (August 2007): 498–501. <https://doi.org/10.1097/01.AOG.0000262902.80861.a0>.

Cramer, Daniel W., William R. Welch, Robert E. Scully, and Carol A. Wojciechowski. "Ovarian Cancer and Talc. A Case-Control Study." *Cancer* 50, no. 2 (July 15, 1982): 372–76. [https://doi.org/10.1002/1097-0142\(19820715\)50:2<372::AID-CNCR2820500235>3.0.CO;2-S](https://doi.org/10.1002/1097-0142(19820715)50:2<372::AID-CNCR2820500235>3.0.CO;2-S).

Crum, Christopher P., Jonathan Bijron, and Brooke E. Howitt. "Pathogenesis of Ovarian, Fallopian Tubal, and Peritoneal Serous Carcinomas." *UpToDate*, 2018.

Crusz, Shanthini M., and Frances R Balkwill. "Inflammation and Cancer: Advances and New Agents." *Nature Reviews Clinical Oncology* 12 (October 2015): 584–96. <https://doi.org/110.1038/nrclinonc.2015.105>.

Curtis D. Klaassen, and John Doull. *Casarett and Doull's Toxicology : The Basic Science of Poisons*. 8th Edition. McGraw-Hill Education, 2013. <https://www.ncbi.nlm.nih.gov/nlmcatalog/101586259>.

Danforth, Kim N., Shelley S. Tworoger, Jonathan L. Hecht, Bernard A. Rosner, Graham A. Colditz, and Susan E. Hankinson. "Breastfeeding and Risk of Ovarian Cancer in Two Prospective

Cohorts.” *Cancer Causes & Control: CCC* 18, no. 5 (June 2007): 517–23. <https://doi.org/10.1007/s10552-007-0130-2>.

“Deposition & Exhibits of John Hopkins, PhD, MDL No. 2738.” In re: Talcum Power Prod. Liab. Litig., August 16, 2018.

“Deposition & Exhibits of Julie Pier, MDL No. 2738.” In re: Talcum Power Prod. Liab. Litig., September 12, 2018.

“Deposition of Alice M. Blount, Ph.D., Circuit Court of the City of St. Louis State of Missouri, Case No.: 1522-CC10417-01,” April 13, 2018.

Devaja, Omer. *Ovarian Cancer From Pathogenesis to Treatment*. IntechOpen, 2018.

Ding, Yuan C., Lesley McGuffog, Sue Healey, Eitan Friedman, Yael Laitman, Shani- Paluch-Shimon, Bella Kaufman, et al. “A Nonsynonymous Polymorphism in IRS1 Modifies Risk of Developing Breast and Ovarian Cancers in BRCA1 and Ovarian Cancer in BRCA2 Mutation Carriers.” *Cancer Epidemiology, Biomarkers & Prevention: A Publication of the American Association for Cancer Research, Cosponsored by the American Society of Preventive Oncology* 21, no. 8 (August 2012): 1362–70. <https://doi.org/10.1158/1055-9965.EPI-12-0229>.

Dixon, Suzanne C., Christina M. Nagle, Nicolas Wentzensen, Britton Trabert, Alicia Beeghly-Fadiel, Joellen M. Schildkraut, Kirsten B. Moysich, et al. “Use of Common Analgesic Medications and Ovarian Cancer Survival: Results from a Pooled Analysis in the Ovarian Cancer Association Consortium.” *British Journal of Cancer* 116, no. 9 (April 25, 2017): 1223–28. <https://doi.org/10.1038/bjc.2017.68>.

Dodson, R. F., M. O’Sullivan, C. J. Corn, and S. P. Hammar. “Quantitative Comparison of Asbestos and Talc Bodies in an Individual with Mixed Exposure.” *American Journal of Industrial Medicine* 27, no. 2 (February 1995): 207–15.

D.R. Petterson. “JNJ 000251888,” April 26, 1973.

Dubeau, L., and R. Drapkin. “Coming into Focus: The Nonovarian Origins of Ovarian Cancer.” *Annals of Oncology: Official Journal of the European Society for Medical Oncology* 24 Suppl 8 (November 2013): viii28–35. <https://doi.org/10.1093/annonc/mdt308>.

Eberl, J. J., and W. L. George. “Comparative Evaluation of the Effects of Talcum and a New Absorbable Substitute on Surgical Gloves.” *American Journal of Surgery* 75, no. 3 (March 1948): 493–97.

Egli, G. E., and M. Newton. “The Transport of Carbon Particles in the Human Female Reproductive Tract.” *Fertility and Sterility* 12 (April 1961): 151–55.

Eng, Kevin H., J. Brian Szender, John Lewis Etter, Jasmine Kaur, Samantha Poblete, Ruea-Yea Huang, Qianqian Zhu, et al. “Paternal Lineage Early Onset Hereditary Ovarian Cancers: A Familial Ovarian Cancer Registry Study.” *PLoS Genetics* 14, no. 2 (February 2018): e1007194. <https://doi.org/10.1371/journal.pgen.1007194>.

“Expert Report of Michael Crowley, Ph.D., In Re: Talcum Powder Prod. Liab. Litig., MDL No. 2738,” November 12, 2018.

Fasching, Peter A., Simon Gayther, Leigh Pearce, Joellen M. Schildkraut, Ellen Goode, Falk Thiel, Georgia Chenevix-Trench, et al. “Role of Genetic Polymorphisms and Ovarian Cancer Susceptibility.” *Molecular Oncology* 3, no. 2 (April 2009): 171–81. <https://doi.org/10.1016/j.molonc.2009.01.008>.

Fathalla, M. F. “Incessant Ovulation and Ovarian Cancer - a Hypothesis Re-Visited.” *Facts, Views & Vision in ObGyn* 5, no. 4 (2013): 292–97.

———. “Incessant Ovulation--a Factor in Ovarian Neoplasia?” *Lancet* 2, no. 7716 (July 17, 1971): 163.

FDA. “Ltr to Samuel S. Epstein, M.D., RE: Docket Numbers 94P-0420 and FDA-2008-P-0309-0001 /CP,” April 1, 2017.

Fedak, Kristen M., Autumn Bernal, Zachary A. Capshaw, and Sherilyn Gross. “Applying the Bradford Hill Criteria in the 21st Century: How Data Integration Has Changed Causal Inference in Molecular Epidemiology.” *Emerging Themes in Epidemiology* 12, no. 14 (2015). <https://doi.org/10.1186/s12982-015-0037-4>.

“Federal Register Vol. 81, No.243, December 19, 2016 FDA Ban on Surgical Gloves.” Accessed August 16, 2018.

<https://www.gpo.gov/fdsys/search/pagedetails.action?collectionCode=FR&browsePath=2016%2F12%2F12-19%5C%2F2%2FConsumer+Product+Safety+Commission&isCollapsed=true&leafLevelBrowse=true&packageId=FR-2016-12-19&isDocumentResults=true&ycord=173&isDocumentResults=true&ycord=173>.

Ferguson, Lynnette R. “Chronic Inflammation and Mutagenesis.” *Mutation Research* 690, no. 1–2 (August 7, 2010): 3–11. <https://doi.org/10.1016/j.mrfmmm.2010.03.007>.

Fernandes, José Veríssimo, Ricardo Ney Oliveira Cobucci, Carlos André Nunes Jatobá, Thales Allyrio Araújo de Medeiros Fernandes, Judson Welber Veríssimo de Azevedo, and Josélio Maria Galvão de Araújo. “The Role of the Mediators of Inflammation in Cancer Development.” *Pathology & Oncology Research* 21, no. 3 (July 2015): 527–34. <https://doi.org/10.1007/s12253-015-9913-z>.

Ferrante, Daniela, Marinella Bertolotti, Annalisa Todesco, Dario Mirabelli, Benedetto Terracini, and Corrado Magnani. “Cancer Mortality and Incidence of Mesothelioma in a Cohort of Wives of Asbestos Workers in Casale Monferrato, Italy.” *Environmental Health Perspectives* 115, no. 10 (October 2007): 1401–5. <https://doi.org/10.1289/ehp.10195>.

Ferrer, Jaume, Juan F. Montes, Maria A. Villarino, Richard W. Light, and José García-Valero. “Influence of Particle Size on Extrapleural Talc Dissemination after Talc Slurry Pleurodesis.” *Chest* 122, no. 3 (September 2002): 1018–27.

Fiume, Monice M., Ivan Boyer, Wilma F. Bergfeld, Donald V. Belsito, Ronald A. Hill, Curtis D. Klaassen, Daniel C. Liebler, et al. “Safety Assessment of Talc as Used in Cosmetics.” *International Journal of Toxicology* 34, no. 1 suppl (July 1, 2015): 66S–129S. <https://doi.org/10.1177/1091581815586797>.

Fletcher, Nicole M., Jimmy Belotte, Mohammed G. Saed, Ira Memaj, Michael P. Diamond, Robert T. Morris, and Ghassan M. Saed. “Specific Point Mutations in Key Redox Enzymes Are Associated with Chemoresistance in Epithelial Ovarian Cancer.” *Free Radical Biology and Medicine* 102 (2017): 122–32. <https://doi.org/10.1016/j.freeradbiomed.2016.11.028>.

Fletcher, Nicole M., Zhongliang Jiang, Rouba Ali-Fehmi, Nancy K. Levin, Jimmy Belotte, Michael A. Tainsky, Michael P. Diamond, Husam M. Abu-Soud, and Ghassan M. Saed. “Myeloperoxidase and Free Iron Levels: Potential Biomarkers for Early Detection and Prognosis of Ovarian Cancer.” *Cancer Biomarkers* 10 (2012 2011): 267–75. <https://doi.org/10.3233/CBM-2012-0255>.

Fletcher, Nicole, Memaj, Ira, and Saed, Ghassan. “Talcum Powder Enhances Oxidative Stress in Ovarian Cancer Cells.” *Reproductive Sciences*, February 28, 2018. <https://doi.org/10.1177/1933719118759999>.

Fletcher, NM, and GM Saed. “Talcum Powder Enhances Cancer Antigen 125 Levels in Ovarian Cancer Cells.” *Presented at the 65th Meeting of the Society for Reproductive Investigation, San Diego, California*, 2018.

Folkins, Ann K., Elke A. Jarboe, Jonathan L. Hecht, Michael G. Muto, and Christopher P. Crum. "Chapter 24 - Assessing Pelvic Epithelial Cancer Risk and Intercepting Early Malignancy." In *Diagnostic Gynecologic and Obstetric Pathology (Third Edition)*, 844–64. Philadelphia: Content Repository Only!, 2018. <https://doi.org/10.1016/B978-0-323-44732-4.00024-8>.

Ford, D., D.F. Easton, M. Stratton, S. Narod, D. Goldgar, P. Devilee, D.T. Bishop, et al. "Genetic Heterogeneity and Penetrance Analysis of the BRCA1 and BRCA2 Genes in Breast Cancer Families." *The American Journal of Human Genetics* 62, no. 3 (March 1998): 676–89. <https://doi.org/10.1086/301749>.

Freedman, Ralph S, Michael Deavers, Jinsong Liu, and Ena Wang. "Peritoneal Inflammation – A Microenvironment for Epithelial Ovarian Cancer (EOC)." *Journal of Translational Medicine* 2, no. 23 (2004). <https://doi.org/10.1186/1479-5876-2-23>.

Friebel, Tara M., Susan M. Domchek, and Timothy R. Rebbeck. "Modifiers of Cancer Risk in BRCA1 and BRCA2 Mutation Carriers: Systematic Review and Meta-Analysis." *Journal of the National Cancer Institute* 106, no. 6 (June 2014): dju091. <https://doi.org/10.1093/jnci/dju091>.

Frost, G. "The Latency Period of Mesothelioma among a Cohort of British Asbestos Workers (1978–2005)." *British Journal of Cancer* 109, no. 7 (October 1, 2013): 1965–73. <https://doi.org/10.1038/bjc.2013.514>.

Galea, Sandro, and Roger D. Vaughan. "Moving Beyond the Cause Constraint: A Public Health of Consequence, May 2018." *American Journal of Public Health* 108, no. 5 (May 2018): 602–3. <https://doi.org/10.2105/AJPH.2018.304390>.

Gates, Margaret A., Bernard A. Rosner, Jonathan L. Hecht, and Shelley S. Tworoger. "Risk Factors for Epithelial Ovarian Cancer by Histologic Subtype." *American Journal of Epidemiology* 171, no. 1 (January 1, 2010): 45–53. <https://doi.org/10.1093/aje/kwp314>.

Gates, Margaret A., Shelley S. Tworoger, Kathryn L. Terry, Linda Titus-Ernstoff, Bernard Rosner, Immaculata De Vivo, Daniel W. Cramer, and Susan E. Hankinson. "Talc Use, Variants of the GSTM1, GSTT1, and NAT2 Genes, and Risk of Epithelial Ovarian Cancer." *Cancer Epidemiology, Biomarkers & Prevention : A Publication of the American Association for Cancer Research, Cosponsored by the American Society of Preventive Oncology* 17, no. 9 (September 2008): 2436–44. <https://doi.org/10.1158/1055-9965.EPI-08-0399>.

Genofre, Eduardo H., Francisco S. Vargas, Milena M. P. Acencio, Leila Antonangelo, Lisete R. Teixeira, and Evaldo Marchi. "Talc Pleurodesis: Evidence of Systemic Inflammatory Response to Small Size Talc Particles." *Respiratory Medicine* 103, no. 1 (January 2009): 91–97. <https://doi.org/10.1016/j.rmed.2008.07.021>.

Germani, D., S. Belli, C. Bruno, M. Grignoli, M. Nesti, R. Pirastu, and P. Comba. "Cohort Mortality Study of Women Compensated for Asbestosis in Italy." *American Journal of Industrial Medicine* 36, no. 1 (July 1999): 129–34.

Gertig, D. M., D. J. Hunter, D. W. Cramer, G. A. Colditz, F. E. Speizer, W. C. Willett, and S. E. Hankinson. "Prospective Study of Talc Use and Ovarian Cancer." *Journal of the National Cancer Institute* 92, no. 3 (February 2, 2000): 249–52.

Ghio, Andrew J., Joleen M. Soukup, Lisa A. Dailey, Judy H. Richards, Jennifer L. Turi, Elizabeth N. Pavlisko, and Victor L. Roggli. "Disruption of Iron Homeostasis in Mesothelial Cells after Talc Pleurodesis." *American Journal of Respiratory Cell and Molecular Biology* 46, no. 1 (January 1, 2012): 80–86. <https://doi.org/10.1165/rcmb.2011-0168OC>.

Gloyne, S. R. "Two Cases of Squamous Carcinoma of the Lung Occurring in Asbestosis." *Tubercle* 17 (1935): 5–10.

Godard, B., W. D. Foulkes, D. Provencher, J. S. Brunet, P. N. Tonin, A. M. Mes-Masson, S. A. Narod, and P. Ghadirian. "Risk Factors for Familial and Sporadic Ovarian Cancer among French Canadians: A Case-Control Study." *American Journal of Obstetrics and Gynecology* 179, no. 2 (August 1998): 403–10.

Gonzalez, Kelly D., Katie A. Noltner, Carolyn H. Buzin, Dongqing Gu, Cindy Y. Wen-Fong, Vu Q. Nguyen, Jennifer H. Han, et al. "Beyond Li Fraumeni Syndrome: Clinical Characteristics of Families with P53 Germline Mutations." *Journal of Clinical Oncology: Official Journal of the American Society of Clinical Oncology* 27, no. 8 (March 10, 2009): 1250–56. <https://doi.org/10.1200/JCO.2008.16.6959>.

Gonzalez, Nicole L., Katie M. O'Brien, Aimee A. D'Aloisio, Dale P. Sandler, and Clarice R. Weinberg. "Douching, Talc Use, and Risk of Ovarian Cancer." *Epidemiology (Cambridge, Mass.)* 27, no. 6 (2016): 797–802. <https://doi.org/10.1097/EDE.0000000000000528>.

Goodman, Marc T, Galina Lurie, Pamela J Thompson, Katharine E McDuffie, and Michael E Carney. "Association of Two Common Single-Nucleotide Polymorphisms in the CYP19A1 Locus and Ovarian Cancer Risk." *Endocrine-Related Cancer* 15, no. 4 (December 2008): 1055–60. <https://doi.org/10.1677/ERC-08-0104>.

Gordon, Ronald E., Sean Fitzgerald, and James Millette. "Asbestos in Commercial Cosmetic Talcum Powder as a Cause of Mesothelioma in Women." *International Journal of Occupational and Environmental Health* 20, no. 4 (October 2014): 318–32. <https://doi.org/10.1179/2049396714Y.0000000081>.

Graham, J., and R. Graham. "Ovarian Cancer and Asbestos." *Environmental Research* 1, no. 2 (October 1967): 115–28.

Graham, and Jenkins. "Value of Modified Starch as a Substitute for Talc." *Lancet (London, England)* 1, no. 6708 (March 22, 1952): 590–91.

Green, A., D. Purdie, C. Bain, V. Siskind, P. Russell, M. Quinn, and B. Ward. "Tubal Sterilisation, Hysterectomy and Decreased Risk of Ovarian Cancer. Survey of Women's Health Study Group." *International Journal of Cancer. Journal International Du Cancer* 71, no. 6 (June 11, 1997): 948–51.

Grivennikov, Sergei I., Florian R. Greten, and Michael Karin. "Immunity, Inflammation, and Cancer." *Cell* 140, no. 6 (March 19, 2010): 883–99. <https://doi.org/10.1016/j.cell.2010.01.025>.

Gross, A. J., and P. H. Berg. "A Meta-Analytical Approach Examining the Potential Relationship between Talc Exposure and Ovarian Cancer." *Journal of Exposure Analysis and Environmental Epidemiology* 5, no. 2 (June 1995): 181–95.

Hall, J. M., M. K. Lee, B. Newman, J. E. Morrow, L. A. Anderson, B. Huey, and M. C. King. "Linkage of Early-Onset Familial Breast Cancer to Chromosome 17q21." *Science (New York, N.Y.)* 250, no. 4988 (December 21, 1990): 1684–89.

Halme, J., M. G. Hammond, J. F. Hulka, S. G. Raj, and L. M. Talbert. "Retrograde Menstruation in Healthy Women and in Patients with Endometriosis." *Obstetrics and Gynecology* 64, no. 2 (August 1984): 151–54.

Hamilton, T. C., H. Fox, C. H. Buckley, W. J. Henderson, and K. Griffiths. "Effects of Talc on the Rat Ovary." *British Journal of Experimental Pathology* 65, no. 1 (February 1984): 101–6.

Hankinson, S. E., D. J. Hunter, G. A. Colditz, W. C. Willett, M. J. Stampfer, B. Rosner, C. H. Hennekens, and F. E. Speizer. "Tubal Ligation, Hysterectomy, and Risk of Ovarian Cancer. A Prospective Study." *JAMA* 270, no. 23 (December 15, 1993): 2813–18.

Hannenhalli, Sridhar, and Klaus H. Kaestner. "The Evolution of Fox Genes and Their Role in Development and Disease." *Nature Reviews. Genetics* 10, no. 4 (April 2009): 233–40. <https://doi.org/10.1038/nrg2523>.

Harlow, B. L., D. W. Cramer, D. A. Bell, and W. R. Welch. "Perineal Exposure to Talc and Ovarian Cancer Risk." *Obstetrics and Gynecology* 80, no. 1 (July 1992): 19–26.

Harlow, B. L., and P. A. Hartge. "A Review of Perineal Talc Exposure and Risk of Ovarian Cancer." *Regulatory Toxicology and Pharmacology: RTP* 21, no. 2 (April 1995): 254–60. <https://doi.org/10.1006/rtpb.1995.1039>.

Harlow, B. L., and N. S. Weiss. "A Case-Control Study of Borderline Ovarian Tumors: The Influence of Perineal Exposure to Talc." *American Journal of Epidemiology* 130, no. 2 (August 1989): 390–94.

Harper, Amy K, and Ghassan Saed. "Talc Induces a pro-Oxidant State in Normal and Ovarian Cancer Cells through Genetic Point Mutations in Key Redox Enzymes," Accepted for Presentation at SGO Meeting," In Press 2019.

Hartge, P., R. Hoover, L. P. Lesher, and L. McGowan. "Talc and Ovarian Cancer." *JAMA: The Journal of the American Medical Association* 250, no. 14 (October 14, 1983): 1844.

Hasselbalch, Hans Carl. "Chronic Inflammation as a Promotor of Mutagenesis in Essential Thrombocythemia, Polycythemia Vera and Myelofibrosis. A Human Inflammation Model for Cancer Development?" *Leukemia Research* 37, no. 2 (February 2013): 214–20. <https://doi.org/10.1016/j.leukres.2012.10.020>.

Havrilesky, Laura J., Patricia G. Moorman, William J. Lowery, Jennifer M. Gierisch, Remy R. Coeytaux, Rachel Peragallo Urrutia, Michaela Dinan, et al. "Oral Contraceptive Pills as Primary Prevention for Ovarian Cancer: A Systematic Review and Meta-Analysis." *Obstetrics and Gynecology* 122, no. 1 (July 2013): 139–47. <https://doi.org/10.1097/AOG.0b013e318291c235>.

Heller, D. S., R. E. Gordon, and N. Katz. "Correlation of Asbestos Fiber Burdens in Fallopian Tubes and Ovarian Tissue." *American Journal of Obstetrics and Gynecology* 181, no. 2 (August 1999): 346–47.

Heller, D. S., R. E. Gordon, C. Westhoff, and S. Gerber. "Asbestos Exposure and Ovarian Fiber Burden." *American Journal of Industrial Medicine* 29, no. 5 (May 1996): 435–39. [https://doi.org/10.1002/\(SICI\)1097-0274\(199605\)29:5<435::AID-AJIM1>3.0.CO;2-L](https://doi.org/10.1002/(SICI)1097-0274(199605)29:5<435::AID-AJIM1>3.0.CO;2-L).

Heller, D. S., C. Westhoff, R. E. Gordon, and N. Katz. "The Relationship between Perineal Cosmetic Talc Usage and Ovarian Talc Particle Burden." *American Journal of Obstetrics and Gynecology* 174, no. 5 (May 1996): 1507–10.

Henderson, W. J., T. C. Hamilton, M. S. Baylis, C. G. Pierrepont, and K. Griffiths. "The Demonstration of the Migration of Talc from the Vagina and Posterior Uterus to the Ovary in the Rat." *Environmental Research* 40, no. 2 (August 1986): 247–50.

Henderson, W. J., C. A. Joslin, A. C. Turnbull, and K. Griffiths. "Talc and Carcinoma of the Ovary and Cervix." *The Journal of Obstetrics and Gynaecology of the British Commonwealth* 78, no. 3 (March 1971): 266–72.

Hernán, Miguel A. "The C-Word: Scientific Euphemisms Do Not Improve Causal Inference From Observational Data." *American Journal of Public Health* 108, no. 5 (May 2018): 616–19. <https://doi.org/10.2105/AJPH.2018.304337>.

Hill, Austin Bradford. "The Environment and Disease: Association or Causation?" *Proceedings of the Royal Society of Medicine* 58, no. 5 (May 1965): 295–300.

Hillegass, Jedd M., Arti Shukla, Maximilian B. MacPherson, Jeffrey P. Bond, Chad Steele, and Brooke T. Mossman. "Utilization of Gene Profiling and Proteomics to Determine Mineral

Pathogenicity in a Human Mesothelial Cell Line (LP9/TERT-1).” *Journal of Toxicology and Environmental Health. Part A* 73, no. 5 (January 2010): 423–36.  
<https://doi.org/10.1080/15287390903486568>.

Horowitz, Neil S., Austin Miller, Bunja Rungruang, Scott D. Richard, Noah Rodriguez, Michael A. Bookman, Chad A. Hamilton, Thomas C. Krivak, and G. Larry Maxwell. “Does Aggressive Surgery Improve Outcomes? Interaction between Preoperative Disease Burden and Complex Surgery in Patients with Advanced-Stage Ovarian Cancer: An Analysis of GOG 182.” *Journal of Clinical Oncology: Official Journal of the American Society of Clinical Oncology* 33, no. 8 (March 10, 2015): 937–43. <https://doi.org/10.1200/JCO.2014.56.3106>.

Houghton, Serena C., Katherine W. Reeves, Susan E. Hankinson, Lori Crawford, Dorothy Lane, Jean Wactawski-Wende, Cynthia A. Thomson, Judith K. Ockene, and Susan R. Sturgeon. “Perineal Powder Use and Risk of Ovarian Cancer.” *Journal of the National Cancer Institute* 106, no. 9 (September 2014). <https://doi.org/10.1093/jnci/dju208>.

Huncharek, Michael, J. F. Geschwind, and Bruce Kupelnick. “Perineal Application of Cosmetic Talc and Risk of Invasive Epithelial Ovarian Cancer: A Meta-Analysis of 11,933 Subjects from Sixteen Observational Studies.” *Anticancer Research* 23, no. 2C (April 2003): 1955–60.

Huncharek, Michael, Joshua Muscat, Adedayo Onitilo, and Bruce Kupelnick. “Use of Cosmetic Talc on Contraceptive Diaphragms and Risk of Ovarian Cancer: A Meta-Analysis of Nine Observational Studies.” *European Journal of Cancer Prevention: The Official Journal of the European Cancer Prevention Organisation (ECP)* 16, no. 5 (October 2007): 422–29.  
<https://doi.org/10.1097/01.cej.0000236257.03394.4a>.

Hunn, Jessica, and Gustavo C. Rodriguez. “Ovarian Cancer: Etiology, Risk Factors, and Epidemiology.” *Clinical Obstetrics and Gynecology* 55, no. 1 (March 2012): 3–23.  
<https://doi.org/10.1097/GRF.0b013e31824b4611>.

IARC. “IARC Monographs on the Evaluation of Carcinogenic Risks to Humans – IARC : Asbestos,” 1977. <https://monographs.iarc.fr/arc-monographs-on-the-evaluation-of-carcinogenic-risks-to-humans-79/>.

\_\_\_\_\_. “IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Volume 58. Beryllium, Cadmium, Mercury, and Exposures in the Glass Manufacturing Industry,” 1993.

\_\_\_\_\_. “IARC Monographs on the Evaluation of Carcinogenic Risks to Humans Volume 93 Carbon Black, Titanium Dioxide, and Talc.” *IARC Monographs on the Evaluation of Carcinogenic Risks to Humans / World Health Organization, International Agency for Research on Cancer* 93 (2010): 1–413.

\_\_\_\_\_. “IARC Monographs on the Evaluation of Carcinogenic Risks to Humans: Volume 100C,” 2012.

\_\_\_\_\_. “IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans: Silica and Some Silicates.” IARC, 1987.

\_\_\_\_\_. “IARC Monographs on the Evaluation of the Carcinogenic Risks to Humans. Overall Evaluations of Carcinogenicity: An Updating of IARC Monographs Volumes 1-42. Supplement 7,” 1987. <https://monographs.iarc.fr/wp-content/uploads/2018/06/Suppl7.pdf>.

IARC, International Agency for Research on Cancer, and World Health Organization, eds. *Carbon Black, Titanium Dioxide, and Talc*. IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, v. 93. Lyon, France : Geneva: International Agency for Research on Cancer ; Distributed by WHO Press, 2010.

“IMERYS 013188,” n.d.

“IMERYS 088907 Rio Tinto Minerals HSE&EA Science Advisory Meeting.” September 17, 2007.

“IMERYS 284935,” n.d.

“IMERYS137677-IMERYS137690,” 2004.

“IMERYS209971,” 1972.

“IMERYS210136,” n.d.

“IMERYS241866,” n.d.

“IMERYS248877,” n.d.

“IMERYS255101,” n.d.

“IMERYS255224,” n.d.

“IMERYS255384,” n.d.

“IMERYS255394,” n.d.

“IMERYS255395,” n.d.

“IMERYS279884,” n.d.

“IMERYS279968,” n.d.

“IMERYS281335,” n.d.

“IMERYS281776,” n.d.

“IMERYS324700,” n.d.

“IMERYS-A\_0011817,” n.d.

“Inflammation: A Hidden Path to Breaking the Spell of Ovarian Cancer.” *Cell Cycle* 8, no. 19 (2009): 3107–11.

Institute of Medicine (US) Committee on Asbestos: Selected Health Effects. *Asbestos: Selected Cancers*. The National Academies Collection: Reports Funded by National Institutes of Health. Washington (DC): National Academies Press (US), 2006.  
<http://www.ncbi.nlm.nih.gov/books/NBK20332/>.

Isaacs, Claudine, and Beth N Peshkin. “Management of Patients at High Risk for Breast and Ovarian Cancer.” *UpToDate*, 2018.

Iturralde, M., and P. F. Venter. “Hysterosalpingo-Radionuclide Scintigraphy (HERS).” *Seminars in Nuclear Medicine* 11, no. 4 (October 1981): 301–14.

J. Lightfoot, G.A. Kingston, and F.D. Pooley. “An Examination of Italian Mine Samples and Relevant Powders,” 1972.

Jaiswal, M., N. F. LaRusso, L. J. Burgart, and G. J. Gores. “Inflammatory Cytokines Induce DNA Damage and Inhibit DNA Repair in Cholangiocarcinoma Cells by a Nitric Oxide-Dependent Mechanism.” *Cancer Research* 60, no. 1 (January 1, 2000): 184–90.

“JANSSEN-000056 P-23 (Pltf\_MISC\_00000321) Ortho Diaphragm Information,” n.d.

Jaurand, M. C. “Mechanisms of Fiber-Induced Genotoxicity.” *Environmental Health Perspectives* 105 Suppl 5 (September 1997): 1073–84. <https://doi.org/10.1289/ehp.97105s51073>.

———. “Particulate-State Carcinogenesis: A Survey of Recent Studies on the Mechanisms of Action of Fibres.” *IARC Scientific Publications*, no. 90 (1989): 54–73.

Jaurand, MC. “Mechanisms of Fibre Genotoxicity.” In *Mechanisms in Fibre Carcinogenesis*. New York: Plenum Press, 1991.

Jervis, Sarah, Honglin Song, Andrew Lee, Ed Dicks, Jonathan Tyrer, Patricia Harrington, Douglas F. Easton, Ian J. Jacobs, Paul P. D. Pharoah, and Antonis C. Antoniou. “Ovarian Cancer Familial Relative Risks by Tumour Subtypes and by Known Ovarian Cancer Genetic Susceptibility Variants.” *Journal of Medical Genetics* 51, no. 2 (February 2014): 108–13.  
<https://doi.org/10.1136/jmedgenet-2013-102015>.

Jia, D, Y Nagaoka, S Orsulic, and M Katsumata. "Inflammation Is a Key Contributor to Ovarian Cancer Cell Seeding." *Scientific Reports* 8, no. 12394 (August 17, 2018). <https://doi.org/10.1038/s41598-018-30261-8>.

Jiang, Zhongliang, Nicole M. Fletcher, Rouba Ali-Fehmi, Michael P. Diamond, Husam M. Abu-Soud, Adnan R. Munkarah, and Ghassan M. Saed. "Modulation of Redox Signaling Promotes Apoptosis in Epithelial Ovarian Cancer Cells." *Gynecologic Oncology* 122, no. 2 (August 2011): 418–23. <https://doi.org/10.1016/j.ygyno.2011.04.051>.

"JNJ000000704 P-396," n.d.

"JNJ000011150," n.d.

"JNJ000016645," n.d.

"JNJ000019415," n.d.

"JNJ000025132," 1976.

"JNJ000025132," n.d.

"JNJ000026987," n.d.

"JNJ000046293," n.d.

"JNJ000245678," n.d.

"JNJ000245762," n.d.

"JNJ000251888," n.d.

"JNJ000260700," n.d.

"JNJ000261010," n.d.

"JNJ000265536," n.d.

"JNJ000279507," n.d.

"JNJ000348778," n.d.

"JNJ000404860," n.d.

"JNJ000460665," n.d.

"JNJ000526750," n.d.

John M. DeSesso. "Exponent Talc Defense Presentation Toxic Talc?" January 18, 2018.

Jones, Richard E., and Kristin H. Lopez. "Human Reproductive Biology - 4th Edition Chapter 9 - Gamete Transport and Fertilization." In *Human Reproductive Biology*, Third., 159–73. San Diego: Academic Press, 2006. <https://doi.org/10.1016/B978-0-12-382184-3.00009-X>.

Jordan, SJ, KL Cushing-Haugen, KG Wicklund, JA Doherty, and MA Rossing. "Breast Feeding and Risk of Epithelial Ovarian Cancer." *Cancer Causes & Control : CCC* 23, no. 6 (June 2012): 919–27. <https://doi.org/10.1007/s10552-012-9963-4>.

Jordan, Susan J., Victor Siskind, Adèle C Green, David C. Whiteman, and Penelope M. Webb. "Breastfeeding and Risk of Epithelial Ovarian Cancer." *Cancer Causes & Control: CCC* 21, no. 1 (January 2010): 109–16. <https://doi.org/10.1007/s10552-009-9440-x>.

Jordan, Susan J., David C. Whiteman, David M. Purdie, Adèle C. Green, and Penelope M. Webb. "Does Smoking Increase Risk of Ovarian Cancer? A Systematic Review." *Gynecologic Oncology* 103, no. 3 (December 2006): 1122–29. <https://doi.org/10.1016/j.ygyno.2006.08.012>.

Jurinski, Joseph B., and J. Donald Rimstidt. "Biodurability of Talc." *American Mineralogist* 86, no. 4 (April 2001): 392–99. <https://doi.org/10.2138/am-2001-0402>.

Kane, AB, P Boffetta, R Saracci, and JD Wilbourn. "Mechanisms of Fibre Carcinogenesis." IARC, 1996.

Kang, N., D. Griffin, and H. Ellis. "The Pathological Effects of Glove and Condom Dusting Powders." *Journal of Applied Toxicology* 12, no. 6 (December 1992): 443–49. <https://doi.org/10.1002/jat.2550120614>.

Karageorgi, Stalo, Margaret A. Gates, Susan E. Hankinson, and Immaculata De Vivo. "Perineal Use of Talcum Powder and Endometrial Cancer Risk." *Cancer Epidemiology, Biomarkers & Prevention : A Publication of the American Association for Cancer Research, Cosponsored by the American Society of Preventive Oncology* 19, no. 5 (May 2010): 1269–75. <https://doi.org/10.1158/1055-9965.EPI-09-1221>.

Kasper, C. S., and P. J. Chandler. "Possible Morbidity in Women from Talc on Condoms." *JAMA: The Journal of the American Medical Association* 273, no. 11 (March 15, 1995): 846–47.

Kauff, Noah D., Nandita Mitra, Mark E. Robson, Karen E. Hurley, Shaokun Chuai, Deborah Goldfrank, Eve Wadsworth, et al. "Risk of Ovarian Cancer in BRCA1 and BRCA2 Mutation-Negative Hereditary Breast Cancer Families." *Journal of the National Cancer Institute* 97, no. 18 (September 21, 2005): 1382–84. <https://doi.org/10.1093/jnci/dji281>.

Keskin, Nadi, Yasemin Aktan Teksen, Esra Gürlek Ongun, Yusuf Ozay, and Halil Saygili. "Does Long-Term Talc Exposure Have a Carcinogenic Effect on the Female Genital System of Rats? An Experimental Pilot Study." *Archives of Gynecology and Obstetrics* 280, no. 6 (December 2009): 925–31. <https://doi.org/10.1007/s00404-009-1030-3>.

Khan, Mohd Imran, AmoghA. Sahasrabuddhe, Govil Patil, Mohd Javed Akhtar, Mohd Ashquin, and Iqbal Ahmad. "Nano-Talc Stabilizes TNF-  $\alpha$  mRNA in Human Macrophages." *Journal of Biomedical Nanotechnology* 7, no. 1 (January 1, 2011): 112–13. <https://doi.org/10.1166/jbn.2011.1227>.

King, HM. "Talc: The Softest Mineral," n.d. <https://geology.com/minerals/talc.shtml>.

King, Talmadge. "Asbestos-Related Pleuropulmonary Disease." Edited by Kevin Flaherty. *UpToDate*, 2018.

Kiraly, Orsolya, Guanyu Gong, Werner Olipitz, Sureshkumar Muthupalani, and Bevin P. Engelward. "Inflammation-Induced Cell Proliferation Potentiates DNA Damage-Induced Mutations In Vivo." *PLoS Genetics*, February 3, 2015. <https://doi.org/10.1371/journal.pgen.1004901>.

Kissler, Stefan, Ernst Siebzehnruel, Joachim Kohl, Anja Mueller, Nadja Hamscho, Regine Gaetje, Andre Ahr, Achim Rody, and Manfred Kaufmann. "Uterine Contractility and Directed Sperm Transport Assessed by Hysterosalpingoscopy (HSSG) and Intrauterine Pressure (IUP) Measurement." *Acta Obstetricia Et Gynecologica Scandinavica* 83, no. 4 (April 2004): 369–74.

Klampfer, Lidija. "Cytokines, Inflammation and Colon Cancer." *Current Cancer Drug Targets* 11, no. 4 (May 2011): 451–64.

Knudson, A. G. "Mutation and Cancer: Statistical Study of Retinoblastoma." *Proceedings of the National Academy of Sciences of the United States of America* 68, no. 4 (April 1971): 820–23.

Kunz, G., D. Beil, H. Deiniger, A. Einspanier, G. Mall, and G. Leyendecker. "The Uterine Peristaltic Pump. Normal and Impeded Sperm Transport within the Female Genital Tract." *Advances in Experimental Medicine and Biology* 424 (1997): 267–77.

Kurman, Robert J., and Ie-Ming Shih. "Molecular Pathogenesis and Extraovarian Origin of Epithelial Ovarian Cancer. Shifting the Paradigm." *Human Pathology* 42, no. 7 (July 2011): 918–31. <https://doi.org/10.1016/j.humpath.2011.03.003>.

———. "The Dualistic Model of Ovarian Carcinogenesis." *The American Journal of Pathology* 186, no. 4 (April 1, 2016): 733–47. <https://doi.org/10.1016/j.ajpath.2015.11.011>.

———. "The Origin and Pathogenesis of Epithelial Ovarian Cancer: A Proposed Unifying Theory." *The American Journal of Surgical Pathology* 34, no. 3 (March 2010): 433–43. <https://doi.org/10.1097/PAS.0b013e3181cf3d79>.

Kurta, Michelle L., Kirsten B. Moysich, Joel L. Weissfeld, Ada O. Youk, Clareann H. Bunker, Robert P. Edwards, Francesmary Modugno, Roberta B. Ness, and Brenda Diergaarde. "Use of Fertility

Drugs and Risk of Ovarian Cancer: Results from a US-Based Case-Control Study.” *Cancer Epidemiology, Biomarkers & Prevention : A Publication of the American Association for Cancer Research, Cosponsored by the American Society of Preventive Oncology* 21, no. 8 (August 2012): 1282–92. <https://doi.org/10.1158/1055-9965.EPI-12-0426>.

La Vecchia. “Ovarian Cancer: Epidemiology and Risk Factors.” *European Journal of Cancer Prevention* 26 (2017): 55–62.

Lancaster, Johnathan M., C. Bethan Powell, Lee-may Chen, and Debra L. Richardson. “Society of Gynecologic Oncology Statement on Risk Assessment for Inherited Gynecologic Cancer Predispositions.” *Gynecologic Oncology* 136, no. 1 (January 2015): 3–7. <https://doi.org/10.1016/j.ygyno.2014.09.009>.

Landen, Charles N., Michael J. Birrer, and Anil K. Sood. “Early Events in the Pathogenesis of Epithelial Ovarian Cancer.” *Journal of Clinical Oncology: Official Journal of the American Society of Clinical Oncology* 26, no. 6 (February 20, 2008): 995–1005. <https://doi.org/10.1200/JCO.2006.07.9970>.

Langseth, H., S. E. Hankinson, J. Siemiatycki, and E. Weiderpass. “Perineal Use of Talc and Risk of Ovarian Cancer.” *Journal of Epidemiology and Community Health* 62, no. 4 (April 2008): 358–60. <https://doi.org/10.1136/jech.2006.047894>.

Langseth, H., B.V. Johansen, J.M. Nesland, and K. Kjaerheim. “Asbestos Fibers in Ovarian Tissue from Norwegian Pulp and Paper Workers.” *International Journal of Gynecological Cancer* 17, no. 1 (January 2007): 44–49. <https://doi.org/10.1111/j.1525-1438.2006.00768.x>.

Langseth, Hilde, and Kristina Kjaerheim. “Ovarian Cancer and Occupational Exposure among Pulp and Paper Employees in Norway.” *Scandinavian Journal of Work, Environment & Health* 30, no. 5 (October 2004): 356–61.

Lanphear, B. P., and C. R. Buncher. “Latent Period for Malignant Mesothelioma of Occupational Origin.” *Journal of Occupational Medicine.: Official Publication of the Industrial Medical Association* 34, no. 7 (July 1992): 718–21.

Lee, Jennifer S., Esther M. John, Valerie McGuire, Anna Felberg, Kimberly L. Ostrow, Richard A. DiCioccio, Frederick P. Li, Alexander Miron, Dee W. West, and Alice S. Whittemore. “Breast and Ovarian Cancer in Relatives of Cancer Patients, with and without BRCA Mutations.” *Cancer Epidemiology, Biomarkers & Prevention: A Publication of the American Association for Cancer Research, Cosponsored by the American Society of Preventive Oncology* 15, no. 2 (February 2006): 359–63. <https://doi.org/10.1158/1055-9965.EPI-05-0687>.

Levanon, Keren, Christopher Crum, and Ronny Drapkin. “New Insights Into the Pathogenesis of Serous Ovarian Cancer and Its Clinical Impact.” *Journal of Clinical Oncology* 26, no. 32 (November 10, 2008): 5284–93. <https://doi.org/10.1200/JCO.2008.18.1107>.

Levy-Lahad, E., and E. Friedman. “Cancer Risks among BRCA1 and BRCA2 Mutation Carriers.” *British Journal of Cancer* 96, no. 1 (January 15, 2007): 11–15. <https://doi.org/10.1038/sj.bjc.6603535>.

Lin, Hui-Wen, Ying-Yueh Tu, Shiying Yu Lin, Wei-Ju Su, Wei Li Lin, Wei Zer Lin, Shen-Chi Wu, and Yuen-Liang Lai. “Risk of Ovarian Cancer in Women with Pelvic Inflammatory Disease: A Population-Based Study.” *The Lancet. Oncology* 12, no. 9 (September 2011): 900–904. [https://doi.org/10.1016/S1470-2045\(11\)70165-6](https://doi.org/10.1016/S1470-2045(11)70165-6).

Liou, Geou-Yarn, and Peter Storz. “Reactive Oxygen Species in Cancer.” *Free Radical Research* 44, no. 5 (May 2010): 476–96. <https://doi.org/10.3109/10715761003667554>.

Liu, D. T., and A. Hitchcock. "Endometriosis: Its Association with Retrograde Menstruation, Dysmenorrhoea and Tubal Pathology." *British Journal of Obstetrics and Gynaecology* 93, no. 8 (August 1986): 859–62.

Lo-Ciganic, Wei-Hsuan, Janice C. Zgibor, Clareann H. Bunker, Kirsten B. Moysich, Robert P. Edwards, and Roberta B. Ness. "Aspirin, Nonaspirin Nonsteroidal Anti-Inflammatory Drugs, or Acetaminophen and Risk of Ovarian Cancer." *Epidemiology (Cambridge, Mass.)* 23, no. 2 (March 2012): 311–19. <https://doi.org/10.1097/EDE.0b013e3182456ad3>.

Lockey, J. E. "Nonasbestos Fibrous Minerals." *Clinics in Chest Medicine* 2, no. 2 (May 1981): 203–18.

"Longo - Feb 2018 MAS Report," 2018.

Longo, D. L., and R. C. Young. "Cosmetic Talc and Ovarian Cancer." *Lancet* 2, no. 8138 (August 18, 1979): 349–51.

Longo, William E., and Mark W. Rigler. "Analysis of Johnson & Johnson Baby Powder & Valiant Shower to Shower Products for Amphibole (Tremolite) Asbestos," August 2, 2017.

Longo, William E., and Rigler, Mark W. "MAS Project #14-1683, Analysis of William E. Longo, PhD and Mark W. Rigler, PhD," April 28, 2017.

\_\_\_\_\_. "TEM Analysis of Historical 1978 Johnson's Baby Powder Sample for Amphibole Asbestos," February 16, 2018.

Longo, William E., and Mark W. Rigler. "The Analysis of Johnson & Johnson's Historical Baby Powder & Shower to Shower Products from the 1960's to the Early 1990's for Amphibole Asbestos," November 14, 2018.

Longo, William E., Mark W. Rigler, and William B. Egeland. "Below the Waist Application of Johnson & Johnson Baby Powder." Materials Analytical Service, LLC, September 2017.

Luan, Nan-Nan, Qi-Jun Wu, Ting-Ting Gong, Emily Vogtmann, Yong-Lai Wang, and Bei Lin. "Breastfeeding and Ovarian Cancer Risk: A Meta-Analysis of Epidemiologic Studies." *The American Journal of Clinical Nutrition* 98, no. 4 (October 2013): 1020–31. <https://doi.org/10.3945/ajcn.113.062794>.

Lundin, Eva, Laure Dossus, Tess Clendenen, Vittorio Krogh, Kjell Grankvist, Marianne Wulff, Sabina Sieri, et al. "C-Reactive Protein and Ovarian Cancer: A Prospective Study Nested in Three Cohorts (Sweden, USA, Italy)." *Cancer Causes & Control: CCC* 20, no. 7 (September 2009): 1151–59. <https://doi.org/10.1007/s10552-009-9330-2>.

Madsen, Cecilie, Louise Baandrup, Christian Dehlendorff, and Susanne K. Kjaer. "Tubal Ligation and Salpingectomy and the Risk of Epithelial Ovarian Cancer and Borderline Ovarian Tumors: A Nationwide Case-Control Study." *Acta Obstetricia Et Gynecologica Scandinavica* 94, no. 1 (January 2015): 86–94. <https://doi.org/10.1111/aogs.12516>.

Magnani, C., D. Ferrante, F. Barone-Adesi, M. Bertolotti, A. Todesco, D. Mirabelli, and B. Terracini. "Cancer Risk after Cessation of Asbestos Exposure: A Cohort Study of Italian Asbestos Cement Workers." *Occupational and Environmental Medicine* 65, no. 3 (March 2008): 164–70. <https://doi.org/10.1136/oem.2007.032847>.

Mäki-Nevala, Satu, Virinder Kaur Sarhadi, Aija Knuutila, Ilari Scheinin, Pekka Ellonen, Sonja Lagström, Mikko Rönty, et al. "Driver Gene and Novel Mutations in Asbestos-Exposed Lung Adenocarcinoma and Malignant Mesothelioma Detected by Exome Sequencing." *Lung* 194, no. 1 (February 2016): 125–35. <https://doi.org/10.1007/s00408-015-9814-7>.

Mallen, Adrienne R., Mary K. Townsend, and Shelley S. Tworoger. "Risk Factors for Ovarian Carcinoma." *Hematology/Oncology Clinics of North America*, September 2018. <https://doi.org/10.1016/j.hoc.2018.07.002>.

Mannino, David M. "Cigarette Smoking and Other Possible Risk Factors for Lung Cancer." *UpToDate*, 2018.

McCullough, Marie. "Condom Makers Stop Using Talc." *Asbury Park Press*. January 16, 1996.

———. "Women's Health Concerns Prompt Condom Makers to Stop Using Talc." *Jersey Journal*. April 17, 1996, City Edition edition.

McLaughlin-Drubin, Margaret E., and Karl Munger. "Viruses Associated with Human Cancer." *Biochimica et Biophysica Acta* 1782, no. 3 (March 2008): 127–50. <https://doi.org/10.1016/j.bbadi.2007.12.005>.

McLemore, Miaskowski, Chen Aouizerat, and Dodd. "Epidemiological and Genetic Factors Associated With Ovarian Cancer." *Cancer Nursing* 32, no. 4 (2009): 281–88.

Melaiu, Ombretta, Federica Gemignani, and Stefano Landi. "The Genetic Susceptibility in the Development of Malignant Pleural Mesothelioma." *Journal of Thoracic Disease* 10, no. Suppl 2 (January 2018): S246–52. <https://doi.org/10.21037/jtd.2017.10.41>.

Meng, Qingsong, Weixue Sun, John Jiang, Nicole M. Fletcher, Michael P. Diamond, and Ghassan M. Saed. "Identification of Common Mechanisms between Endometriosis and Ovarian Cancer." *Journal of Assisted Reproduction and Genetics* 28 (2011): 917–23.

Merritt, Melissa A., Adèle C. Green, Christina M. Nagle, Penelope M. Webb, Australian Cancer Study (Ovarian Cancer), and Australian Ovarian Cancer Study Group. "Talcum Powder, Chronic Pelvic Inflammation and NSAIDs in Relation to Risk of Epithelial Ovarian Cancer." *International Journal of Cancer. Journal International Du Cancer* 122, no. 1 (January 1, 2008): 170–76. <https://doi.org/10.1002/ijc.23017>.

Miller, Diane M., and Jessica N. McAlpine. "Opportunistic Salpingectomy for Ovarian, Fallopian Tubal, and Peritoneal Carcinoma Risk Reduction." *UpToDate*, 2018.

Mills, Paul K., Deborah G. Riordan, Rosemary D. Cress, and Heather A. Young. "Perineal Talc Exposure and Epithelial Ovarian Cancer Risk in the Central Valley of California." *International Journal of Cancer. Journal International Du Cancer* 112, no. 3 (November 10, 2004): 458–64. <https://doi.org/10.1002/ijc.20434>.

Milne, R. L., and A. C. Antoniou. "Genetic Modifiers of Cancer Risk for BRCA1 and BRCA2 Mutation Carriers." *Annals of Oncology: Official Journal of the European Society for Medical Oncology* 22 Suppl 1 (January 2011): i11-17. <https://doi.org/10.1093/annonc/mdq660>.

Milne, Roger L., and Antonis C. Antoniou. "Modifiers of Breast and Ovarian Cancer Risks for BRCA1 and BRCA2 Mutation Carriers." *Endocrine-Related Cancer* 23, no. 10 (2016): T69-84. <https://doi.org/10.1530/ERC-16-0277>.

Moller, Danielsen, and Roursgaard Jantzen. "Oxidatively Damaged DNA in Animals Exposed to Particles." *Critical Reviews in Toxicology* 43, no. 2 (2013): 96–118.

Moon, Min Chaul, Jung Duck Park, Byung Soon Choi, So Young Park, Dong Won Kim, Yong Hyun Chung, Naomi Hisanaga, and Il Je Yu. "Risk Assessment of Baby Powder Exposure through Inhalation." *Toxicological Research* 27, no. 3 (September 2011): 137–41. <https://doi.org/10.5487/TR.2011.27.3.137>.

Moorman, Patricia G. "Scientific Review of the Epidemiologic Evidence on Talc Use and Ovarian Cancer," February 2018.

Moorman, Patricia G., Rachel T. Palmieri, Lucy Akushevich, Andrew Berchuck, and Joellen M. Schildkraut. "Ovarian Cancer Risk Factors in African-American and White Women." *American Journal of Epidemiology* 170, no. 5 (September 1, 2009): 598–606. <https://doi.org/10.1093/aje/kwp176>.

Mostafa, S. A., C. B. Bargeron, R. W. Flower, N. B. Rosenshein, T. H. Parmley, and J. D. Woodruff. “Foreign Body Granulomas in Normal Ovaries.” *Obstetrics and Gynecology* 66, no. 5 (November 1985): 701–2.

Murphy, Megan A., Britton Trabert, Hannah P. Yang, Yikyung Park, Louise A. Brinton, Patricia Hartge, Mark E. Sherman, Albert Hollenbeck, and Nicolas Wentzensen. “Non-Steroidal Anti-Inflammatory Drug Use and Ovarian Cancer Risk: Findings from the NIH-AARP Diet and Health Study and Systematic Review.” *Cancer Causes & Control : CCC* 23, no. 11 (November 2012): 1839–52. <https://doi.org/10.1007/s10552-012-0063-2>.

Muscat, J. E., and M. S. Huncharek. “Causation and Disease: Biomedical Science in Toxic Tort Litigation.” *Journal of Occupational Medicine.: Official Publication of the Industrial Medical Association* 31, no. 12 (December 1989): 997–1002.

Nadler, Diana L., and Igor G. Zurbenko. “Estimating Cancer Latency Times Using a Weibull Model,” 2014, 8.

Narod, Steven A. “Talc and Ovarian Cancer.” *Gynecologic Oncology* 141, no. 3 (2016): 410–12. <https://doi.org/10.1016/j.ygyno.2016.04.011>.

National Cancer Institute, Surveillance, Epidemiology, and End Results Program. “Cancer Stat Facts: Ovarian Cancer,” 2018. <https://seer.cancer.gov/statfacts/html/ovary.html>.

“National Toxicology Program (NTP) Technical Report (NTP TR 421) on the Toxicology and Carcinogenesis Studies of Talc in F344/N Rats and B6C3F1 Mice.” National Institutes of Health, 1993.

Nelson, Heather H., and Karl T. Kelsey. “The Molecular Epidemiology of Asbestos and Tobacco in Lung Cancer.” *Oncogene* 21, no. 48 (October 21, 2002): 7284–88. <https://doi.org/10.1038/sj.onc.1205804>.

Ness, R. B., and C. Cottreau. “Possible Role of Ovarian Epithelial Inflammation in Ovarian Cancer.” *JNCI Journal of the National Cancer Institute* 91, no. 17 (September 1, 1999): 1459–67. <https://doi.org/10.1093/jnci/91.17.1459>.

Ness, R. B., J. A. Grisso, C. Cottreau, J. Klapper, R. Vergona, J. E. Wheeler, M. Morgan, and J. J. Schlesselman. “Factors Related to Inflammation of the Ovarian Epithelium and Risk of Ovarian Cancer.” *Epidemiology (Cambridge, Mass.)* 11, no. 2 (March 2000): 111–17.

Ness, Roberta B., Daniel W. Cramer, Marc T. Goodman, Susanne Krüger Kjaer, Kathy Mallin, Berit Jul Mosgaard, David M. Purdie, Harvey A. Risch, Ronald Vergona, and Anna H. Wu. “Infertility, Fertility Drugs, and Ovarian Cancer: A Pooled Analysis of Case-Control Studies.” *American Journal of Epidemiology* 155, no. 3 (February 1, 2002): 217–24.

Neutra, Raymond Richard, Carl F. Cranor, and David Gee. “The Use and Misuse of Bradford Hill in U.S. Tort Law.” *Jurimetrics J.*, 2018, 127–62.

Newhouse, M. L., G. Berry, J. C. Wagner, and M. E. Turok. “A Study of the Mortality of Female Asbestos Workers.” *British Journal of Industrial Medicine* 29, no. 2 (April 1972): 134–41.

Nick, Alpa M., Robert L. Coleman, Pedro T. Ramirez, and Anil K. Sood. “A Framework for a Personalized Surgical Approach to Ovarian Cancer.” *Nature Reviews. Clinical Oncology* 12, no. 4 (April 2015): 239–45. <https://doi.org/10.1038/nrclinonc.2015.26>.

NIOSH. “Asbestos Fibers and Other Elongated Mineral Particles: State of the Science and Roadmap for Research (Revised Draft),” January 2009.

—. “Fiber Exposure during Use of Baby Powders, Report No. IWS-36-6.,” July 1972. <https://www.cdc.gov/niosh/nioshtic-2/00106056.html>.

“NIOSH 2011 Current Intelligence Bulletin No. 62,” 2011.

“NIOSHTIC-2 Publications Search - 00106056 - Fiber Exposure during Use of Baby Powders, Report No. IWS-36-6.” Accessed August 16, 2018. <https://www.cdc.gov/niosh/nioshtic-2/00106056.html>.

“NIOSHTIC-2 Publications Search - 00106056 - Fiber .Pdf,” n.d.

Norquist, Barbara M., Maria I. Harrell, Mark F. Brady, Tom Walsh, Ming K. Lee, Suleyman Gulsuner, Sarah S. Bernards, et al. “Inherited Mutations in Women With Ovarian Carcinoma.” *JAMA Oncology* 2, no. 4 (April 2016): 482–90. <https://doi.org/10.1001/jamaoncol.2015.5495>.

NTP. “NTP Technical Report on the Toxicology and Carcinogenesis Studies of Benzophenone (CAS No. 119-61-9) In F344/N Rats and B6C3F1 Mice,” February 2006.

“NTP Toxicology and Carcinogenesis Studies of Talc (CAS No. 14807-96-6)(NonAsbestiform) in F344/N.Rats and B6C3F1 Mice (Inhalation Studies),” 1993.

Oberdörster, Günter, Eva Oberdörster, and Jan Oberdörster. “Nanotoxicology: An Emerging Discipline Evolving from Studies of Ultrafine Particles.” *Environmental Health Perspectives* 113, no. 7 (July 2005): 823–39. <https://doi.org/10.1289/ehp.7339>.

Okada, Futoshi. “Beyond Foreign-Body-Induced Carcinogenesis: Impact of Reactive Oxygen Species Derived from Inflammatory Cells in Tumorigenic Conversion and Tumor Progression.” *International Journal of Cancer* 121, no. 11 (December 1, 2007): 2364–72. <https://doi.org/10.1002/ijc.23125>.

Paoletti, L., S. Caiazza, G. Donelli, and F. Pocchiari. “Evaluation by Electron Microscopy Techniques of Asbestos Contamination in Industrial, Cosmetic, and Pharmaceutical Talc.” *Regulatory Toxicology and Pharmacology: RTP* 4, no. 3 (September 1984): 222–35.

Park, Hyo K., Joellen M. Schildkraut, Anthony J. Alberg, Elisa V. Bandera, Jill S. Barnholtz-Sloan, Melissa Bondy, Sydnee Crankshaw, et al. “Benign Gynecologic Conditions Are Associated with Ovarian Cancer Risk in African-American Women: A Case–Control Study.” *Cancer Causes & Control*, September 29, 2018. <https://doi.org/10.1007/s10552-018-1082-4>.

Parmar, M. K. B., J. A. Ledermann, N. Colombo, A. du Bois, J.-F. Delaloye, G. B. Kristensen, S. Wheeler, et al. “Paclitaxel plus Platinum-Based Chemotherapy versus Conventional Platinum-Based Chemotherapy in Women with Relapsed Ovarian Cancer: The ICON4/AGO-OVAR-2.2 Trial.” *Lancet (London, England)* 361, no. 9375 (June 21, 2003): 2099–2106.

Parmley, T. H., and J. D. Woodruff. “The Ovarian Mesothelioma.” *American Journal of Obstetrics and Gynecology* 120, no. 2 (September 15, 1974): 234–41.

*Pathology of Asbestos-Associated Diseases*, 2011. <http://www.springer.com/medicine/pathology/book/978-1-4419-1894-9>.

“PCPC\_MDL00062175,” May 25, 1999.

Pearce, Celeste Leigh, Claire Templeman, Mary Anne Rossing, Alice Lee, Aimee M Near, Penelope M Webb, Christina M Nagle, et al. “Association between Endometriosis and Risk of Histological Subtypes of Ovarian Cancer: A Pooled Analysis of Case–Control Studies.” *The Lancet Oncology* 13, no. 4 (April 2012): 385–94. [https://doi.org/10.1016/S1470-2045\(11\)70404-1](https://doi.org/10.1016/S1470-2045(11)70404-1).

Pejovic, Tanja, and Farr Nezhat. “Missing Link: Inflammation and Ovarian Cancer.” *The Lancet. Oncology* 12, no. 9 (September 2011): 833–34. [https://doi.org/10.1016/S1470-2045\(11\)70203-0](https://doi.org/10.1016/S1470-2045(11)70203-0).

Pelling, D., and J. G. Evans. “Long-Term Peritoneal Tissue Response in Rats to Mould-Release Agents and Lubricant Powder Used on Surgeons’ Gloves.” *Food and Chemical Toxicology: An International Journal Published for the British Industrial Biological Research Association* 24, no. 5 (May 1986): 425–30.

Penninkilampi, Ross, and Guy D. Eslick. "Perineal Talc Use and Ovarian Cancer: A Systematic Review and Meta-Analysis." *Epidemiology (Cambridge, Mass.)* 29, no. 1 (January 2018): 41–49. <https://doi.org/10.1097/EDE.0000000000000745>.

Peshkin, B., and et al. "Genetic Counseling and Testing for Hereditary Breast and Ovarian Cancer - UpToDate," 2018. [https://www.uptodate.com/contents/genetic-counseling-and-testing-for-hereditary-breast-and-ovarian-cancer?search=Genetic%20counseling%20and%20testing%20for%20hereditary%20breast%20and%20ovarian%20cancer&source=search\\_result&selectedTitle=1~150&usage\\_type=default&display\\_rank=1](https://www.uptodate.com/contents/genetic-counseling-and-testing-for-hereditary-breast-and-ovarian-cancer?search=Genetic%20counseling%20and%20testing%20for%20hereditary%20breast%20and%20ovarian%20cancer&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1)

\_\_\_\_\_. "Overview of Hereditary Breast and Ovarian Cancer Syndromes - UpToDate," 2018. [https://www.uptodate.com/contents/overview-of-hereditary-breast-and-ovarian-cancer-syndromes?search=Overview%20of%20hereditary%20breast%20and%20ovarian%20cancer%20syndromes&source=search\\_result&selectedTitle=1~150&usage\\_type=default&display\\_rank=1](https://www.uptodate.com/contents/overview-of-hereditary-breast-and-ovarian-cancer-syndromes?search=Overview%20of%20hereditary%20breast%20and%20ovarian%20cancer%20syndromes&source=search_result&selectedTitle=1~150&usage_type=default&display_rank=1).

\_\_\_\_\_. "Prevalence of BRCA1 and BRCA2 Mutations and Associated Cancer Risks - UpToDate," 2018. [https://www.uptodate.com/contents/prevalence-of-brca1-and-brca2-mutations-and-associated-cancer-risks?search=prevalence-of-brca1-and-brca2-mu%20%80%A6search\\_result%26selectedTitle%3D1~73%26usage\\_type%3Ddefault%26display\\_rank%3D1&source=search\\_result&selectedTitle=2~150&usage\\_type=default&display\\_rank=2](https://www.uptodate.com/contents/prevalence-of-brca1-and-brca2-mutations-and-associated-cancer-risks?search=prevalence-of-brca1-and-brca2-mu%20%80%A6search_result%26selectedTitle%3D1~73%26usage_type%3Ddefault%26display_rank%3D1&source=search_result&selectedTitle=2~150&usage_type=default&display_rank=2).

Phillips, J. C., P. J. Young, K. Hardy, and S. D. Gangolli. "Studies on the Absorption and Disposition of 3H-Labelled Talc in the Rat, Mouse, Guinea-Pig and Rabbit." *Food and Cosmetics Toxicology* 16, no. 2 (April 1978): 161–63.

Pira, E, C Pelucchi, L Buffoni, A Palmas, M Turbiglio, E Negri, P G Piolatto, and C La Vecchia. "Cancer Mortality in a Cohort of Asbestos Textile Workers." *British Journal of Cancer* 92, no. 3 (February 2005): 580–86. <https://doi.org/10.1038/sj.bjc.6602240>.

Pira, Enrico, Canzio Romano, Francesco S. Violante, Andrea Farioli, Giovanna Spatari, Carlo La Vecchia, and Paolo Boffetta. "Updated Mortality Study of a Cohort of Asbestos Textile Workers." *Cancer Medicine* 5, no. 9 (2016): 2623–28. <https://doi.org/10.1002/cam4.824>.

“Pltf\_MISC\_00000272 (JANSSEN-000001-19),” 1962.  
Porro, F. W. and N. M. Levine. “Pathology of Talc Pneumoconiosis with Report of an Autopsy.”

Pott, R., and K. H. Friedrichs. "Tumors in Rats Following i.p. Injection of Fiberform Dusts." *Northern New York Medical Journal* 3 (April 1946): 23-25.

Prat, Jaime, and FIGO Committee on Gynecologic Oncology. "Abridged Republication of FIGO's

Pukkala, Eero, Jan Ivar Martinsen, Elsebeth Lyngé, Holmfridur Kolbrún Gunnarsdóttir, Pär Sparén, Frat, Jamie, and FIGO Committee on Gynecologic Oncology. "Abridged Reproduction of FIGO's Staging Classification for Cancer of the Ovary, Fallopian Tube, and Peritoneum." *Cancer* 121, no. 19 (October 1, 2015): 3452–54. <https://doi.org/10.1002/cncr.29524>.

Tukkala, Eero, Jari Ivar Martinsen, Elsebeth Lylinge, Hólmfríður Kolbrún Guðmarsdóttir, Far Særen, Laufey Tryggvadóttir, Elisabete Weiderpass, and Kristina Kjaerheim. "Occupation and Cancer - Follow-up of 15 Million People in Five Nordic Countries." *Acta Oncologica (Stockholm, Sweden)* 48, no. 5 (2009): 646–790. <https://doi.org/10.1080/02841860902913546>.

Purdie, D., A. Green, C. Bain, V. Siskind, B. Ward, N. Hacker, M. Quinn, G. Wright, P. Russell, and B. Susil. "Reproductive and Other Factors and Risk of Epithelial Ovarian Cancer: An Australian Case-Control Study. Survey of Women's Health Study Group." *International Journal of Cancer. Journal International Du Cancer* 62, no. 6 (September 15, 1995): 678–84.

Purdie, David M., Christopher J. Bain, Victor Siskind, Penelope M. Webb, and Adèle C. Green. “Ovulation and Risk of Epithelial Ovarian Cancer.” *International Journal of Cancer. Journal International Du Cancer* 104, no. 2 (March 20, 2003): 228–32. <https://doi.org/10.1002/ijc.10927>.

Radic, I, I Vucak, J Milosevic, A Marusic, S Vukicevic, and M Marusic. “Immunosuppression Induced by Talc Granulomatosis in the Rat.” *Clinical and Experimental Immunology* 73, no. 2 (August 1988): 316–21.

Ramus, Susan J., Antonis C. Antoniou, Karoline B. Kuchenbaecker, Penny Soucy, Jonathan Beesley, Xiaoqing Chen, Lesley McGuffog, et al. “Ovarian Cancer Susceptibility Alleles and Risk of Ovarian Cancer in BRCA1 and BRCA2 Mutation Carriers.” *Human Mutation* 33, no. 4 (April 2012): 690–702. <https://doi.org/10.1002/humu.22025>.

Rasool, Nabila, Amanda Nickles Fader, Leigh Seamon, Nikki L. Neubauer, Fadi Abu Shahin, Heather A. Alexander, Kathleen Moore, et al. “Stage I, Grade 3 Endometrioid Adenocarcinoma of the Endometrium: An Analysis of Clinical Outcomes and Patterns of Recurrence.” *Gynecologic Oncology* 116, no. 1 (January 2010): 10–14. <https://doi.org/10.1016/j.ygyno.2009.10.043>.

Rayburn, Elizabeth R., Scharri J. Ezell, and Ruiwen Zhang. “Anti-Inflammatory Agents for Cancer Therapy.” *Molecular and Cellular Pharmacology* 1, no. 1 (2009): 29–43. <https://doi.org/10.4255/mcpharmacol.09.05>.

Rebeck, Timothy R., Nandita Mitra, Fei Wan, Olga M. Sinilnikova, Sue Healey, Lesley McGuffog, Sylvie Mazoyer, et al. “Association of Type and Location of BRCA1 and BRCA2 Mutations with Risk of Breast and Ovarian Cancer.” *JAMA* 313, no. 13 (April 7, 2015): 1347–61. <https://doi.org/10.1001/jama.2014.5985>.

“Reference Manual on Scientific Evidence” Third Edition (2011).

Reid, A., J. Heyworth, N. de Klerk, and A. W. Musk. “The Mortality of Women Exposed Environmentally and Domestically to Blue Asbestos at Wittenoom, Western Australia.” *Occupational and Environmental Medicine* 65, no. 11 (November 2008): 743–49. <https://doi.org/10.1136/oem.2007.035782>.

Reid, A., N. de Klerk, and A. W. Musk. “Does Exposure to Asbestos Cause Ovarian Cancer? A Systematic Literature Review and Meta-Analysis.” *Cancer Epidemiology Biomarkers & Prevention* 20, no. 7 (July 1, 2011): 1287–95. <https://doi.org/10.1158/1055-9965.EPI-10-1302>.

Reid, A., N. H. de Klerk, C. Magnani, D. Ferrante, G. Berry, A. W. Musk, and E. Merler. “Mesothelioma Risk after 40 Years since First Exposure to Asbestos: A Pooled Analysis.” *Thorax* 69, no. 9 (September 2014): 843–50. <https://doi.org/10.1136/thoraxjnl-2013-204161>.

Reid, Alison, Amanda Segal, Jane S. Heyworth, Nicholas H. de Klerk, and Arthur W. Musk. “Gynecologic and Breast Cancers in Women after Exposure to Blue Asbestos at Wittenoom.” *Cancer Epidemiology, Biomarkers & Prevention: A Publication of the American Association for Cancer Research, Cosponsored by the American Society of Preventive Oncology* 18, no. 1 (January 2009): 140–47. <https://doi.org/10.1158/1055-9965.EPI-08-0746>.

Reid, Brett M., Jennifer B. Permut, and Thomas A. Sellers. “Epidemiology of Ovarian Cancer: A Review.” *Cancer Biology & Medicine* 14, no. 1 (February 2017): 9–32. <https://doi.org/10.20892/j.issn.2095-3941.2016.0084>.

Reuter, Simone, Subash C. Gupta, Madan M. Chaturvedi, and Bharat B. Aggarwal. “Oxidative Stress, Inflammation, and Cancer: How Are They Linked?” *Free Radical Biology and Medicine* 49, no. 11 (December 1, 2010): 1603–16.

Rice, Megan S., Susan E. Hankinson, and Shelley S. Tworoger. “Tubal Ligation, Hysterectomy, Unilateral Oophorectomy, and Risk of Ovarian Cancer in the Nurses’ Health Studies.” *Fertility and Sterility* 102, no. 1 (July 2014): 192–198.e3. <https://doi.org/10.1016/j.fertnstert.2014.03.041>.

Ring, Kari L., Christine Garcia, Martha H. Thomas, and Susan C. Modesitt. "Current and Future Role of Genetic Screening in Gynecologic Malignancies." *American Journal of Obstetrics and Gynecology* 217, no. 5 (2017): 512–21. <https://doi.org/10.1016/j.ajog.2017.04.011>.

Riska, A., J. I. Martinsen, K. Kjaerheim, E. Lynge, P. Sparen, L. Tryggvadottir, E. Weiderpass, and E. Pukkala. "Occupation and Risk of Primary Fallopian Tube Carcinoma in Nordic Countries." *International Journal of Cancer* 131, no. 1 (July 1, 2012): 186–92. <https://doi.org/10.1002/ijc.26337>.

Roggli, Victor L., Robin T. Vollmer, Kelly J. Butnor, and Thomas A. Sporn. "Tremolite and Mesothelioma." *Annals of Occupational Hygiene* 46, no. 5 (July 1, 2002): 447–53. <https://doi.org/10.1093/annhyg/mef056>.

Rohl, A. N. "Asbestos in Talc." *Environmental Health Perspectives* 9 (December 1974): 129–32.

Rohl, A. N., A. M. Langer, I. J. Selikoff, A. Tordini, R. Klimentidis, D. R. Bowes, and D. L. Skinner. "Consumer Talcums and Powders: Mineral and Chemical Characterization." *Journal of Toxicology and Environmental Health* 2, no. 2 (November 1976): 255–84. <https://doi.org/10.1080/15287397609529432>.

Roodhouse Gloyne, S. "Two Cases of Squamous Carcinoma of the Lung Occurring in Asbestosis." *Tubercle* 17, no. 1 (October 1935): 5-IN2. [https://doi.org/10.1016/S0041-3879\(35\)80795-2](https://doi.org/10.1016/S0041-3879(35)80795-2).

Rosalind A. Eeles, Christine D. Berg, and Jeffery S. Tobias. *Cancer Prevention and Screening: Concepts, Principles and Controversies*. 1st ed. Accessed August 21, 2018. <https://www.wiley.com/en-us/Cancer+Prevention+and+Screening%3A+Concepts%2C+Principles+and+Controversies-p-9781118990872>.

Rosenblatt, K. A., M. Szklo, and N. B. Rosenshein. "Mineral Fiber Exposure and the Development of Ovarian Cancer." *Gynecologic Oncology* 45, no. 1 (April 1992): 20–25.

Rosenblatt, Karin A., Noel S. Weiss, Kara L. Cushing-Haugen, Kristine G. Wicklund, and Mary Anne Rossing. "Genital Powder Exposure and the Risk of Epithelial Ovarian Cancer." *Cancer Causes & Control: CCC* 22, no. 5 (May 2011): 737–42. <https://doi.org/10.1007/s10552-011-9746-3>.

Rösler, J. A., H. J. Woitowitz, H. J. Lange, R. H. Woitowitz, K. Ulm, and K. Rödelsperger. "Mortality Rates in a Female Cohort Following Asbestos Exposure in Germany." *Journal of Occupational Medicine.: Official Publication of the Industrial Medical Association* 36, no. 8 (August 1994): 889–93.

Ross, M. "Geology, Asbestos, and Health." *Environmental Health Perspectives* 9 (December 1974): 123–24.

Rothman, Kenneth J., Sander Greenland, and Timothy L. Lash. *Modern Epidemiology*. Lippincott Williams & Wilkins, 2008.

Saed, Ghassan M., Rouba Ali-Fehmi, Zhong L. Jiang, Nicole M. Fletcher, Michael P. Diamond, Husam M. Abu-Soud, and Adnan R. Munkarah. "Myeloperoxidase Serves as a Redox Switch That Regulates Apoptosis in Epithelial Ovarian Cancer." *Gynecologic Oncology* 116, no. 2 (February 2010): 276–81. <https://doi.org/10.1016/j.ygyno.2009.11.004>.

Saed, Ghassan M., Michael P. Diamond, and Nicole M. Fletcher. "Updates of the Role of Oxidative Stress in the Pathogenesis of Ovarian Cancer." *Gynecologic Oncology* 145, no. 3 (June 2017): 595–602. <https://doi.org/10.1016/j.ygyno.2017.02.033>.

Saed, Ghassan M., Nicole M. Fletcher, Michael P. Diamond, Robert T. Morris, Nardhy Gomez-Lopez, and Ira Memaj. "Novel Expression of CD11b in Epithelial Ovarian Cancer: Potential Therapeutic Target." *Gynecologic Oncology* 148, no. 3 (2018): 567–75. <https://doi.org/10.1016/j.ygyno.2017.12.018>.

Saed, Ghassan M., Robert T. Morris, and Nicole M. Fletcher. *New Insights into the Pathogenesis of Ovarian Cancer: Oxidative Stress*, 2018.

Schenken, Robert S. "Endometriosis: Pathogenesis, Clinical Features, and Diagnosis." *UpToDate*, 2018.

Schildkraut, Joellen M., Sarah E. Abbott, Anthony J. Alberg, Elisa V. Bandera, Jill S. Barnholtz-Sloan, Melissa L. Bondy, Michele L. Cote, et al. "Association between Body Powder Use and Ovarian Cancer: The African American Cancer Epidemiology Study (AAACES)." *Cancer Epidemiology, Biomarkers & Prevention: A Publication of the American Association for Cancer Research, Cosponsored by the American Society of Preventive Oncology* 25, no. 10 (2016): 1411–17. <https://doi.org/10.1158/1055-9965.EPI-15-1281>.

"SEER Cancer Statistics Review, 1975–2015, National Cancer Institute, Bethesda, MD, Based on November 2017 SEER Data Submission, Posted to the SEER Web Site," April 2018. [https://Seer.cancer.gov/csr/1975\\_2015/](https://Seer.cancer.gov/csr/1975_2015/).

Shan, Weiwei, and Jinsong Liu. "Inflammation: A Hidden Path to Breaking the Spell of Ovarian Cancer." *Cell Cycle* 8, no. 19 (2009): 3107–11. <https://doi.org/10.4161/cc.8.19.9590>.

Shukla, Arti, Maximilian B. MacPherson, Jedd Hillegass, Maria E. Ramos-Nino, Vlada Alexeeva, Pamela M. Vacek, Jeffrey P. Bond, Harvey I. Pass, Chad Steele, and Brooke T. Mossman. "Alterations in Gene Expression in Human Mesothelial Cells Correlate with Mineral Pathogenicity." *American Journal of Respiratory Cell and Molecular Biology* 41, no. 1 (July 2009): 114–23. <https://doi.org/10.1165/rcmb.2008-0146OC>.

Shushan, A., O. Paltiel, J. Iscovich, U. Elchalal, T. Peretz, and J. G. Schenker. "Human Menopausal Gonadotropin and the Risk of Epithelial Ovarian Cancer." *Fertility and Sterility* 65, no. 1 (January 1996): 13–18.

Singh, Naveena, C. Blake Gilks, Lynn Hirschowitz, Sean Kehoe, Iain A. McNeish, Dianne Miller, Raj Naik, Nafisa Wilkinson, and W. Glenn McCluggage. "Primary Site Assignment in Tubo-Ovarian High-Grade Serous Carcinoma: Consensus Statement on Unifying Practice Worldwide." *Gynecologic Oncology* 141, no. 2 (2016): 195–98. <https://doi.org/10.1016/j.ygyno.2015.10.022>.

Sjösten, A. C. E., H. Ellis, and G. a. B. Edelstam. "Retrograde Migration of Glove Powder in the Human Female Genital Tract." *Human Reproduction* 19, no. 4 (April 1, 2004): 991–95. <https://doi.org/10.1093/humrep/deh156>.

Soini, Tuuli, Ritva Hurskainen, Seija Grénman, Johanna Mäenpää, Jorma Paavonen, and Eero Pukkala. "Cancer Risk in Women Using the Levonorgestrel-Releasing Intrauterine System in Finland." *Obstetrics and Gynecology* 124, no. 2 Pt 1 (August 2014): 292–99. <https://doi.org/10.1097/AOG.0000000000000356>.

Soong, Thing Rinda, Brooke E. Howitt, Alexander Miron, Neil S. Horowitz, Frank Campbell, Colleen M. Feltmate, Michael G. Muto, et al. "Evidence for Lineage Continuity between Early Serous Proliferations (ESPs) in the Fallopian Tube and Disseminated High-Grade Serous Carcinomas." *The Journal of Pathology*, July 25, 2018. <https://doi.org/10.1002/path.5145>.

Stanton, M. F., M. Layard, A. Tegeris, E. Miller, M. May, E. Morgan, and A. Smith. "Relation of Particle Dimension to Carcinogenicity in Amphibole Asbestoses and Other Fibrous Minerals." *Journal of the National Cancer Institute* 67, no. 5 (November 1981): 965–75.

Starman, Daniel H., Leslie A. Litzky, and Larry R. Kaiser. "Epidemiology of Malignant Pleural Mesothelioma." *UpToDate*, 2018.

Steiling, W., J. F. Almeida, H. Assaf Vandecasteele, S. Gilpin, T. Kawamoto, L. O'Keeffe, G. Pappa, K. Rettinger, H. Rothe, and A. M. Bowden. "Principles for the Safety Evaluation of Cosmetic Powders." *Toxicology Letters*, August 17, 2018. <https://doi.org/10.1016/j.toxlet.2018.08.011>.

Steiling, W., M. Bascompta, P. Carthew, G. Catalano, N. Corea, A. D'Haese, P. Jackson, et al. "Principle Considerations for the Risk Assessment of Sprayed Consumer Products." *Toxicology Letters* 227, no. 1 (May 16, 2014): 41–49. <https://doi.org/10.1016/j.toxlet.2014.03.005>.

Stewart, Louise M., C. D'Arcy J. Holman, Patrick Aboagye-Sarfo, Judith C. Finn, David B. Preen, and Roger Hart. "In Vitro Fertilization, Endometriosis, Nulliparity and Ovarian Cancer Risk." *Gynecologic Oncology* 128, no. 2 (February 2013): 260–64. <https://doi.org/10.1016/j.ygyno.2012.10.023>.

Stewart, Louise M., Katrina Spilsbury, Susan Jordan, Colin Stewart, C. D'Arcy J. Holman, Aime Powell, Joanne Reekie, and Paul Cohen. "Risk of High-Grade Serous Ovarian Cancer Associated with Pelvic Inflammatory Disease, Parity and Breast Cancer." *Cancer Epidemiology* 55 (August 2018): 110–16. <https://doi.org/10.1016/j.canep.2018.05.011>.

Straif, Kurt. "Update of the Scientific Evidence on Asbestos and Cancer." presented at the International Conference on Environmental and Occupational Determinants of Cancer: Interventions for Primary Prevention, Asturias (Avilés, Gijón), Spain, March 17, 2011.

"Talc." *IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans* 42 (1987): 185–224.

Tarchi, M., D. Orsi, P. Comba, M. De Santis, R. Pirastu, G. Battista, and M. Valiani. "Cohort Mortality Study of Rock Salt Workers in Italy." *American Journal of Industrial Medicine* 25, no. 2 (February 1994): 251–56.

Terry, Kathryn L., Stalo Karageorgi, Yurii B. Shvetsov, Melissa A. Merritt, Galina Lurie, Pamela J. Thompson, Michael E. Carney, et al. "Genital Powder Use and Risk of Ovarian Cancer: A Pooled Analysis of 8,525 Cases and 9,859 Controls." *Cancer Prevention Research (Philadelphia, Pa.)* 6, no. 8 (August 2013): 811–21. <https://doi.org/10.1158/1940-6207.CAPR-13-0037>.

Tewari, Devansu, James J. Java, Ritu Salani, Deborah K. Armstrong, Maurie Markman, Thomas Herzog, Bradley J. Monk, and John K. Chan. "Long-Term Survival Advantage and Prognostic Factors Associated with Intraperitoneal Chemotherapy Treatment in Advanced Ovarian Cancer: A Gynecologic Oncology Group Study." *Journal of Clinical Oncology: Official Journal of the American Society of Clinical Oncology* 33, no. 13 (May 1, 2015): 1460–66. <https://doi.org/10.1200/JCO.2014.55.9898>.

Thai, T. H., F. Du, J. T. Tsan, Y. Jin, A. Phung, M. A. Spillman, H. F. Massa, et al. "Mutations in the BRCA1-Associated RING Domain (BARD1) Gene in Primary Breast, Ovarian and Uterine Cancers." *Human Molecular Genetics* 7, no. 2 (February 1998): 195–202.

Thomas, Charles A., and Major G. Seelig. Powder lubricated surgeon's rubber glove. United States US2621333A, filed June 27, 1947, and issued December 16, 1952. <https://patents.google.com/patent/US2621333/en>.

Torre, Lindsey A., Britton Trabert, Carol E. DeSantis, Kimberly D. Miller, Goli Samimi, Carolyn D. Runowicz, Mia M. Gaudet, Ahmedin Jemal, and Rebecca L. Siegel. "Ovarian Cancer Statistics, 2018." *CA: A Cancer Journal for Clinicians* 68, no. 4 (July 2018): 284–96. <https://doi.org/10.3322/caac.21456>.

Trabert, Britton. "Body Powder and Ovarian Cancer Risk – What Is the Role of Recall Bias?" *Cancer Epidemiology, Biomarkers & Prevention : A Publication of the American Association for Cancer Research, Cosponsored by the American Society of Preventive Oncology* 25, no. 10 (October 2016): 1369–70. <https://doi.org/10.1158/1055-9965.EPI-16-0476>.

Trabert, Britton, Ligia Pinto, Patricia Hartge, Troy Kemp, Amanda Black, Mark E. Sherman, Louise A. Brinton, et al. "Pre-Diagnostic Serum Levels of Inflammation Markers and Risk of Ovarian

Cancer in the Prostate, Lung, Colorectal and Ovarian Cancer (PLCO) Screening Trial.” *Gynecologic Oncology* 135, no. 2 (November 2014): 297–304. <https://doi.org/10.1016/j.ygyno.2014.08.025>.

Trabert, Britton, Elizabeth M Poole, Emily White, Kala Visvanathan, Hans-Olov Adami, Garnet L. Anderson, Theodore M Brasky, et al. “Analgesic Use and Ovarian Cancer Risk: An Analysis in the Ovarian Cancer Cohort Consortium.” *JNCI: Journal of the National Cancer Institute*, May 31, 2018. <https://doi.org/10.1093/jnci/djy100>.

Trabert, Britton, Elizabeth M. Poole, Emily White, Kala Visvanathan, Hans-Olov Adami, Garnet L. Anderson, Theodore M. Brasky, et al. “Analgesic Use and Ovarian Cancer Risk: An Analysis in the Ovarian Cancer Cohort Consortium.” *Journal of the National Cancer Institute* 111, no. 2 (2019). <https://doi.org/10.1093/jnci/djy100>.

Tsilidis, K K, N E Allen, T J Key, L Dossus, A Lukanova, K Bakken, E Lund, et al. “Oral Contraceptive Use and Reproductive Factors and Risk of Ovarian Cancer in the European Prospective Investigation into Cancer and Nutrition.” *British Journal of Cancer* 105, no. 9 (October 25, 2011): 1436–42. <https://doi.org/10.1038/bjc.2011.371>.

Tsilidis, Konstantinos K., Naomi E. Allen, Timothy J. Key, Laure Dossus, Rudolf Kaaks, Kjersti Bakken, Eiliv Lund, et al. “Menopausal Hormone Therapy and Risk of Ovarian Cancer in the European Prospective Investigation into Cancer and Nutrition.” *Cancer Causes & Control: CCC* 22, no. 8 (August 2011): 1075–84. <https://doi.org/10.1007/s10552-011-9782-z>.

Tworoger, Shelley S., Kathleen M. Fairfield, Graham A. Colditz, Bernard A. Rosner, and Susan E. Hankinson. “Association of Oral Contraceptive Use, Other Contraceptive Methods, and Infertility with Ovarian Cancer Risk.” *American Journal of Epidemiology* 166, no. 8 (October 15, 2007): 894–901. <https://doi.org/10.1093/aje/kwm157>.

Tzonou, A., A. Polychronopoulou, C. C. Hsieh, A. Rebelakos, A. Karakatsani, and D. Trichopoulos. “Hair Dyes, Analgesics, Tranquilizers and Perineal Talc Application as Risk Factors for Ovarian Cancer.” *International Journal of Cancer. Journal International Du Cancer* 55, no. 3 (September 30, 1993): 408–10.

US EPA. “Health Assessment Document for Talc. | National Technical Reports Library - NTIS.” - 600/8-91/217, 1992. <https://ntrlntrs.ntis.gov/NTRL/dashboard/searchResults/titleDetail/PB92239524.xhtml>.

Van Gosen, B. S., H.A. Lowers, S.J. Sutley, and C.A. Gent. “Using the Geologic Setting of Talc Deposits as an Indicator of Amphibole Asbestos Content.” *Environmental Geology* 45, no. 7 (2004): 20. <https://doi.org/10.1007/s00254-003-0955-2>.

Vanderhyden, Barbara C, Tanya J Shaw, and Jean-François Ethier. “Animal Models of Ovarian Cancer.” *Reproductive Biology and Endocrinology: RB&E* 1 (October 7, 2003): 67. <https://doi.org/10.1186/1477-7827-1-67>.

VanOrden, D. “Weight Percent Compositional Analysis of Seven RTV Talc Samples. Analytical Report to R. T. Vanderbilt Company, Inc. Submitted to Public Comments Record – C. W. Jameson, National Toxicology Program, 10th ROC Nominations ‘Talc (Containing Asbestiform Fibers)’. 4 December 2000., National Toxicology Program.,” November 22, 2000.

Vasama-Neuvonen, K., E. Pukkala, H. Paakkulainen, P. Mutanen, E. Weiderpass, P. Boffetta, N. Shen, T. Kauppinen, H. Vainio, and T. Partanen. “Ovarian Cancer and Occupational Exposures in Finland.” *American Journal of Industrial Medicine* 36, no. 1 (July 1999): 83–89.

Vasey, Paul A., Gordon C. Jayson, Alan Gordon, Hani Gabra, Rob Coleman, Ronnie Atkinson, David Parkin, et al. “Phase III Randomized Trial of Docetaxel-Carboplatin versus Paclitaxel-

Carboplatin as First-Line Chemotherapy for Ovarian Carcinoma.” *Journal of the National Cancer Institute* 96, no. 22 (November 17, 2004): 1682–91. <https://doi.org/10.1093/jnci/djh323>.

Venkatesan, Priya. “Possible X Chromosome-Linked Transmission of Ovarian Cancer.” *The Lancet. Oncology* 19, no. 4 (April 2018): e185. [https://doi.org/10.1016/S1470-2045\(18\)30183-9](https://doi.org/10.1016/S1470-2045(18)30183-9).

Venter, P. F., and M. Iturralte. “Migration of a Particulate Radioactive Tracer from the Vagina to the Peritoneal Cavity and Ovaries.” *South African Medical Journal = Suid-Afrikaanse Tydskrif Vir Geneeskunde* 55, no. 23 (June 2, 1979): 917–19.

Verdoordt, Freija, Christian Dehlendorff, Søren Friis, and Susanne K. Kjaer. “Non-Aspirin NSAID Use and Ovarian Cancer Mortality.” *Gynecologic Oncology* 150, no. 2 (2018): 331–37. <https://doi.org/10.1016/j.ygyno.2018.06.018>.

Vicus, Danielle, Amy Finch, Barry Rosen, Isabel Fan, Linda Bradley, Ilana Cass, Ping Sun, et al. “Risk Factors for Carcinoma of the Fallopian Tube in Women with and without a Germline BRCA Mutation.” *Gynecologic Oncology* 118, no. 2 (August 1, 2010): 155–59. <https://doi.org/10.1016/j.ygyno.2010.03.009>.

Vineis, Paolo, Phyllis Illari, and Federica Russo. “Causality in Cancer Research: A Journey through Models in Molecular Epidemiology and Their Philosophical Interpretation.” *Emerging Themes in Epidemiology* 14, no. 7 (2017). <https://doi.org/DOI 10.1186/s12982-017-0061-7>.

Virta, RL. “The Phase Relationship of Talc and Amphiboles in a Fibrous Talc Sample.” IH; Report of Investigations, 1985. <https://www.cdc.gov/niosh/nioshtic-2/10004328.html>.

Vitonis, Allison F., Linda Titus-Ernstoff, and Daniel W. Cramer. “Assessing Ovarian Cancer Risk When Considering Elective Oophorectomy at the Time of Hysterectomy.” *Obstetrics and Gynecology* 117, no. 5 (May 2011): 1042–50. <https://doi.org/10.1097/AOG.0b013e318212fcb7>.

Wang, Chunpeng, Zhenzhen Liang, Xin Liu, Qian Zhang, and Shuang Li. “The Association between Endometriosis, Tubal Ligation, Hysterectomy and Epithelial Ovarian Cancer: Meta-Analyses.” *International Journal of Environmental Research and Public Health* 13, no. 11 (November 14, 2016): 1138. <https://doi.org/10.3390/ijerph13111138>.

Wang, Xiaorong, Sihao Lin, Ignatius Yu, Hong Qiu, Yajia Lan, and Eiji Yano. “Cause-Specific Mortality in a Chinese Chrysotile Textile Worker Cohort.” *Cancer Science* 104, no. 2 (February 2013): 245–49. <https://doi.org/10.1111/cas.12060>.

Watson, Ian R., Koichi Takahashi, P. Andrew Futreal, and Lynda Chin. “Emerging Patterns of Somatic Mutations in Cancer.” *Nature Reviews. Genetics* 14, no. 10 (October 2013): 703–18. <https://doi.org/10.1038/nrg3539>.

Wehner, A. P., A. S. Hall, R. E. Weller, E. A. Lepel, and R. E. Schirmer. “Do Particles Translocate from the Vagina to the Oviducts and Beyond?” *Food and Chemical Toxicology: An International Journal Published for the British Industrial Biological Research Association* 23, no. 3 (March 1985): 367–72.

Wehner, A. P., R. E. Weller, and E. A. Lepel. “On Talc Translocation from the Vagina to the Oviducts and Beyond.” *Food and Chemical Toxicology: An International Journal Published for the British Industrial Biological Research Association* 24, no. 4 (April 1986): 329–38.

Weiss, W. “Cigarette Smoking and Lung Cancer Trends. A Light at the End of the Tunnel?” *Chest* 111, no. 5 (May 1997): 1414–16.

Wentzensen, Nicolas, Elizabeth M. Poole, Britton Trabert, Emily White, Alan A. Arslan, Alpa V. Patel, V. Wendy Setiawan, et al. “Ovarian Cancer Risk Factors by Histologic Subtype: An Analysis From the Ovarian Cancer Cohort Consortium.” *Journal of Clinical Oncology: Official Journal of the American Society of Clinical Oncology* 34, no. 24 (20 2016): 2888–98. <https://doi.org/10.1200/JCO.2016.66.8178>.

Werner, I. "Presence of Asbestos in Talc Samples." *Atemschutzinform* 21, no. 5 (1982).

Whiteman, David C., Michael F. G. Murphy, Linda S. Cook, Daniel W. Cramer, Patricia Hartge, Polly A. Marchbanks, Philip C. Nasca, Roberta B. Ness, David M. Purdie, and Harvey A. Risch. "Multiple Births and Risk of Epithelial Ovarian Cancer." *Journal of the National Cancer Institute* 92, no. 14 (July 19, 2000): 1172–77. <https://doi.org/10.1093/jnci/92.14.1172>.

Whittemore, A. S., R. Harris, and J. Itnyre. "Characteristics Relating to Ovarian Cancer Risk: Collaborative Analysis of 12 US Case-Control Studies. IV. The Pathogenesis of Epithelial Ovarian Cancer. Collaborative Ovarian Cancer Group." *American Journal of Epidemiology* 136, no. 10 (November 15, 1992): 1212–20.

Whittemore, A. S., M. L. Wu, R. S. Paffenbarger, D. L. Sarles, J. B. Kampert, S. Grosser, D. L. Jung, S. Ballon, and M. Hendrickson. "Personal and Environmental Characteristics Related to Epithelial Ovarian Cancer. II. Exposures to Talcum Powder, Tobacco, Alcohol, and Coffee." *American Journal of Epidemiology* 128, no. 6 (December 1988): 1228–40.

Whysner, J., and M. Mohan. "Perineal Application of Talc and Cornstarch Powders: Evaluation of Ovarian Cancer Risk." *American Journal of Obstetrics and Gynecology* 182, no. 3 (March 2000): 720–24.

Wignall, B.K., and A.J. Fox. "Mortality of Female Gas Mask Assemblers." *British Journal of Industrial Medicine* 39, no. 1 (1982): 34–38.

Wild, P. "Lung Cancer Risk and Talc Not Containing Asbestiform Fibres: A Review of the Epidemiological Evidence." *Occupational and Environmental Medicine* 63, no. 1 (January 2006): 4–9. <https://doi.org/10.1136/oem.2005.020750>.

Wolff, Henrik, Tapiio Vehmas, Panu Oksa, Jorma Rantanen, and Harri Vainio. "Asbestos, Asbestosis, and Cancer, the Helsinki Criteria for Diagnosis and Attribution 2014: Recommendations." *Scandinavian Journal of Work, Environment & Health* 41, no. 1 (January 2015): 5–15. <https://doi.org/10.5271/sjweh.3462>.

Wong, C., R. E. Hempling, M. S. Piver, N. Natarajan, and C. J. Mettlin. "Perineal Talc Exposure and Subsequent Epithelial Ovarian Cancer: A Case-Control Study." *Obstetrics and Gynecology* 93, no. 3 (March 1999): 372–76.

Woodruff, J. D. "The Pathogenesis of Ovarian Neoplasia." *The Johns Hopkins Medical Journal* 144, no. 4 (April 1979): 117–20.

Wright, H. R., J. C. Wheeler, J. A. Woods, J. Hesford, P. Taylor, and R. F. Edlich. "Potential Toxicity of Retrograde Uterine Passage of Particulate Matter." *Journal of Long-Term Effects of Medical Implants* 6, no. 3–4 (1996): 199–206.

Wu, A. H., C. L. Pearce, C.-C. Tseng, and M. C. Pike. "African Americans and Hispanics Remain at Lower Risk of Ovarian Cancer Than Non-Hispanic Whites after Considering Nongenetic Risk Factors and Oophorectomy Rates." *Cancer Epidemiology Biomarkers & Prevention* 24, no. 7 (July 1, 2015): 1094–1100. <https://doi.org/10.1158/1055-9965.EPI-15-0023>.

Wu, Anna H., Celeste L. Pearce, Chiu-Chen Tseng, and Malcolm C. Pike. "African Americans and Hispanics Remain at Lower Risk of Ovarian Cancer Than Non-Hispanic Whites after Considering Nongenetic Risk Factors and Oophorectomy Rates." *Cancer Epidemiology, Biomarkers & Prevention: A Publication of the American Association for Cancer Research, Cosponsored by the American Society of Preventive Oncology* 24, no. 7 (July 2015): 1094–1100. <https://doi.org/10.1158/1055-9965.EPI-15-0023>.

Wu, Anna H., Celeste L. Pearce, Chiu-Chen Tseng, Claire Templeman, and Malcolm C. Pike. "Markers of Inflammation and Risk of Ovarian Cancer in Los Angeles County." *International*

*Journal of Cancer. Journal International Du Cancer* 124, no. 6 (March 15, 2009): 1409–15.  
<https://doi.org/10.1002/ijc.24091>.

Wu, Song, Wei Zhu, Patricia Thompson, and Yusuf A. Hannun. “Evaluating Intrinsic and Non-Intrinsic Cancer Risk Factors.” *Nature Communications* 9, no. 1 (August 28, 2018): 3490.  
<https://doi.org/10.1038/s41467-018-05467-z>.

Yan, Bin, Yuanlin Peng, and Chuan-Yuan Li. “Molecular Analysis of Genetic Instability Caused by Chronic Inflammation.” *Methods in Molecular Biology (Clifton, N.J.)* 512 (2009): 15–28.  
[https://doi.org/10.1007/978-1-60327-530-9\\_2](https://doi.org/10.1007/978-1-60327-530-9_2).

Yan, Bin, Huili Wang, Zahid Rabbani, Yulin Zhao, Wenrong Li, Yuqing Yuan, Fang Li, Mark W. Dewhirst, and Chuan-Yuan Li. “Tumor Necrosis Factor-a Is a Potent Endogenous Mutagen That Promotes Cellular Transformation.” *Cancer Research* 66 (December 15, 2006): 11565.

“You Can Steer Clients to Condoms Free from Potentially Harmful Talc: Condom Companies Agree to Produce without the Dry Lubricant.” *Contraceptive Technology Update* 16, no. 11 (November 1995): 133–44.

Zazenski, R., W. H. Ashton, D. Briggs, M. Chudkowski, J. W. Kelse, L. MacEachern, E. F. McCarthy, M. A. Nordhauser, M. T. Roddy, and N. M. Teetsel. “Talc: Occurrence, Characterization, and Consumer Applications.” *Regulatory Toxicology and Pharmacology: RTP* 21, no. 2 (April 1995): 218–29.

Zervomanoklakis, I, H.W. Ott, D Hadzimerovic, V. Mattle, B.E. Seeber, I. Virgolini, D. Heute, S. Kissler, G. Leyendecker, and L. Wildt. “Physiology of Upward Transport in the Human Female Genital Tract.” *Annals of New York Academy of Sciences* 1101, no. 1 (2007): 1–20.  
<https://doi.org/10.1196/annals.1389.032>.

Zhao, Weixing, Justin B. Steinfeld, Fengshan Liang, Xiaoyong Chen, David G. Maranon, Chu Jian Ma, Youngho Kwon, et al. “BRCA1-BARD1 Promotes RAD51-Mediated Homologous DNA Pairing.” *Nature* 550, no. 7676 (19 2017): 360–65. <https://doi.org/10.1038/nature24060>.